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L1              STR
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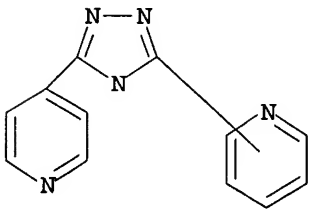

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Structure attributes must be viewed using STN Express query preparation.
L3           81 SEA FILE=REGISTRY SSS FUL L1
L4           53 SEA FILE=CAPLUS L3


=> d l4 1-53 ibib abs hitstr

L4   ANSWER 1 OF 53  CAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:        2006:1159571  CAPLUS
TITLE:                   Metabolic profile of FYX-051 (4-(5-pyridin-4-yl-1H-
                         [1,2,4]triazol-3-yl)pyridine-2-carbonitrile) in the
                         rat, dog, monkey, and human: identification of
                         N-glucuronides and N-glucosides
AUTHOR(S):               Nakazawa, Takashi; Miyata, Kengo; Omura, Koichi;
                         Iwanaga, Takashi; Nagata, Osamu
CORPORATE SOURCE:        Research Laboratories 2, Fuji Yakuhin Co., Ltd.,
                         Saitama, Japan
SOURCE:                  Drug Metabolism and Disposition (2006), 34(11),
                         1880-1886
                         CODEN: DMDSAI; ISSN: 0090-9556
PUBLISHER:               American Society for Pharmacology and Experimental
                         Therapeutics
DOCUMENT TYPE:           Journal
LANGUAGE:                English
AB   FYX-051, 4-(5-pyridin-4-yl-1H-[1,2,4]triazol-3-yl)pyridine-2-carbonitrile,
```

is a novel xanthine oxidoreductase inhibitor that can be used for the treatment of gout and hyperuricemia. We examined the metabolism of FYX-051 in rats, dogs, monkeys, and human volunteers after the p.o. administration of this inhibitor. The main metabolites in urine were pyridine N-oxide in rats, triazole N-glucoside in dogs, and triazole N-glucuronide in monkeys and humans, resp. Furthermore, N-glucuronidation and N-glucosidation were characterized by two types of conjugation: triazole N1- and N2-glucuronidation and N1- and N2-glucosidation, resp. N1- and N2-glucuronidation was observed in each species, whereas N1- and N2-glucosidation was mainly observed in dogs. With regard to the position of conjugation, N1-conjugation was predominant; this resulted in a considerably higher amount of N1-conjugate in each species than N2-conjugate. The present results indicate that the conjugation reaction observed in FYX-051 metabolism is unique, i.e., N-glucuronidation and N-glucosidation occur at the same position of the triazole ring, resulting in the generation of four different conjugates in mammals. In addition, a urinary profile of FYX-051 metabolites in monkeys and humans was relatively similar; triazole N-glucuronides were mainly excreted in urine.

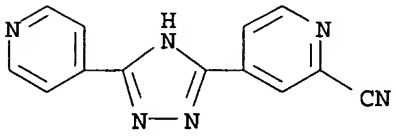
IT INDEXING IN PROGRESS

IT 577778-58-6

RL: PKT (Pharmacokinetics); BIOL (Biological study)
(metabolism of antihyperuricemic drug FYX-051 in the rat, dog, monkey, and human and identification of N-glucuronides and N-glucosides)

RN 577778-58-6 CAPLUS

CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:351989 CAPLUS

DOCUMENT NUMBER: 145:54950

TITLE: Controllable Assembly of Metal-Directed Coordination Polymers under Diverse Conditions: A Case Study of the MII-H3tma/Bpt Mixed-Ligand System

AUTHOR(S): Du, Miao; Jiang, Xiu-Juan; Zhao, Xiao-Jun

CORPORATE SOURCE: College of Chemistry and Life Science, Tianjin Normal University, Tianjin, 300074, Peop. Rep. China

SOURCE: Inorganic Chemistry (2006), 45(10), 3998-4006
CODEN: INOCAJ; ISSN: 0020-1669

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

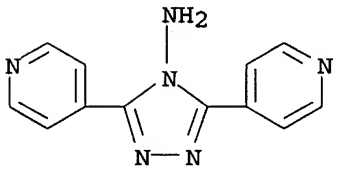
AB New metal-organic polymeric complexes, {[Co(bpt)(Htma)(H2O)3]·2.25H2O}n (1), [Co(bpt)(Htma)(H2O)]n (2), [Ni(bpt)(Htma)(H2O)]n (3), [Zn(bpt)2(H2tma)2]·6H2O (4), {[Cd(bpt)(Htma)(H2O)]·(EtOH)(H2O)1.5}n (5), and {[Cd(bpt)(Htma)(H2O)2]·5.5H2O}n (6), were prepared from solution reactions of 4-amino-3,5-bis(4-pyridyl)-1,2,4-triazole (bpt) and trimesic acid (H3tma) with different metal salts under diverse conditions. All these compds. were structurally determined by x-ray single-crystal diffraction, and the bulk new materials were further identified by x-ray powder diffraction. Complexes 1 and 6 show 1-dimensional zigzag or linear Htma-bridged polymeric chains, with the terminal bpt ligands as pendants, which are extended to 2-dimensional

H-bonded arrays with 4.82 or (6,3) network topol. Coordination polymers 2 and 3, in which the 2-dimensional corrugated metal-organic frameworks make the interdigitated 3-dimensional packing, are isostructural. Complex 4 has a mononuclear structure, and its subunits are H-bonded to each other to give a 2-dimensional gridlike net. For complex 5, the CdII centers are linked by bpt/Htma ligands to form a 2-dimensional (4,4) coordination layer, and these layers are interdigitated in pairs. Notably, secondary noncovalent forces, such as H bonds, play an important role in extending and stabilizing these structural topologies. Distinct products were obtained for CoII (1 and 2) and CdII (5 and 6) under ambient or hydrothermal conditions; however, for NiII and ZnII, single products, 3 and 4, are generated. The thermal stabilities of 1-6 were studied by TGA of mass loss. The desorption/adsorption properties of the porous material 5 are also discussed. Solid-state luminescent spectra of the ZnII and CdII complexes, 4-6, indicate intense fluorescent emissions at ca. 380 nm.

IT 38634-05-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(for preparation of transition metal aminobis(pyridyl)triazole trimesic acid coordination polymers and zinc aminobis(pyridyl)triazole trimesic acid mononuclear complex)

RN 38634-05-8 CAPLUS

CN 4H-1,2,4-Triazol-4-amine, 3,5-di-4-pyridinyl- (9CI) (CA INDEX NAME)



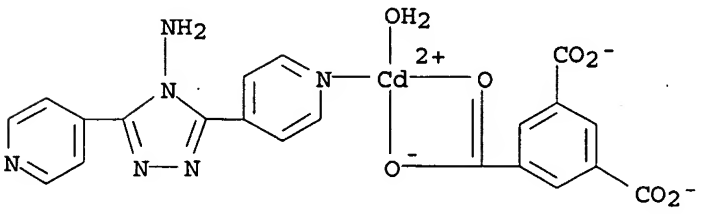
IT 890016-34-9P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(polymeric; preparation, crystal structure, desorption/adsorption properties, hydrogen bonding, luminescence and thermal stability of)

RN 890016-34-9 CAPLUS

CN Cadmate(1-), aqua[1,3,5-benzenetricarboxylato(3-)-κO1,κO1'][3-(4-pyridinyl-κN)-5-(4-pyridinyl)-4H-1,2,4-triazol-4-amine]-, (T-4)-, hydrogen, compd. with ethanol, hydrate (2:2:3) (9CI) (CA INDEX NAME)

CM 1

CRN 890016-33-8
CMF C21 H15 Cd N6 O7 . H
CCI CCS

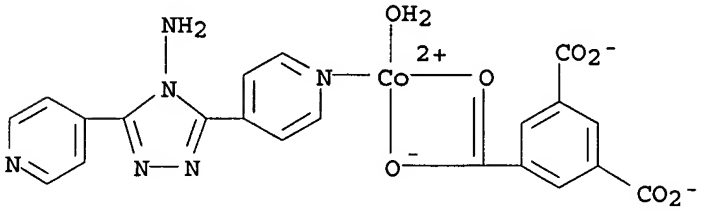


CM 2

CRN 64-17-5
CMF C2 H6 O

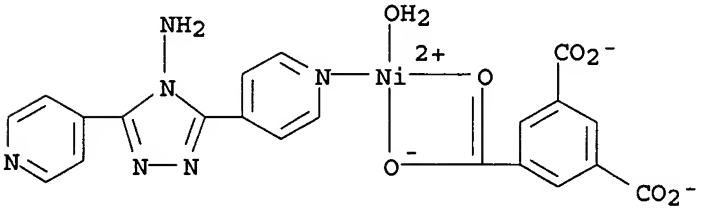
H_3C-CH_2-OH

IT 890016-30-5P 890016-31-6P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(polymeric; preparation, crystal structure, hydrogen bonding and thermal stability of)
RN 890016-30-5 CAPLUS
CN Cobaltate(1-), aqua[1,3,5-benzenetricarboxylato(3-)-κO1,κO1'][3-(4-pyridinyl-κN)-5-(4-pyridinyl)-4H-1,2,4-triazol-4-amine]-, hydrogen (9CI) (CA INDEX NAME)



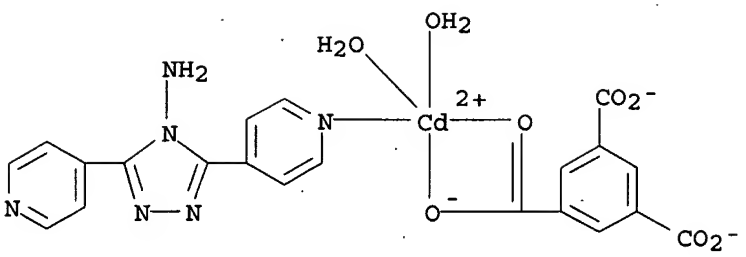
● H^+

RN 890016-31-6 CAPLUS
CN Nickelate(1-), aqua[1,3,5-benzenetricarboxylato(3-)-κO1,κO1'][3-(4-pyridinyl-κN)-5-(4-pyridinyl)-4H-1,2,4-triazol-4-amine]-, hydrogen (9CI) (CA INDEX NAME)



● H^+

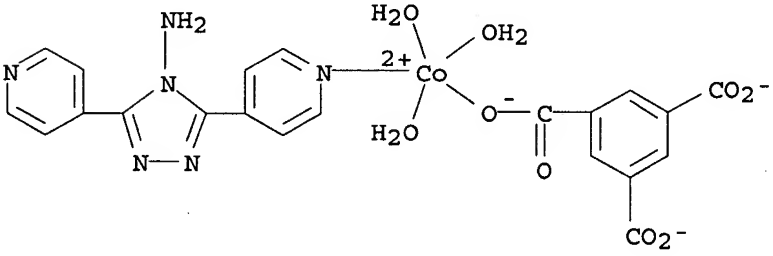
IT 890016-35-0P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(polymeric; preparation, crystal structure, hydrogen bonding, luminescence and thermal stability of)
RN 890016-35-0 CAPLUS
CN Cadmate(1-), diaqua[1,3,5-benzenetricarboxylato(3-)-κO1,κO1'][3-(4-pyridinyl-κN)-5-(4-pyridinyl)-4H-1,2,4-triazol-4-amine]-, hydrogen, hydrate (2:11) (9CI) (CA INDEX NAME)



● H^+

●11/2 H_2O

IT 890016-29-2P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(polymeric; preparation, crystal structure, hydrogen bonding, pi-pi stacking interactions and thermal stability of)
RN 890016-29-2 CAPLUS
CN Cobaltate(1-), triaqua[1,3,5-benzenetricarboxylato(3-)-κO][3-(4-pyridinyl-κN)-5-(4-pyridinyl)-4H-1,2,4-triazol-4-amine]-, hydrogen, hydrate (4:9), (SP-5-13)- (9CI) (CA INDEX NAME)

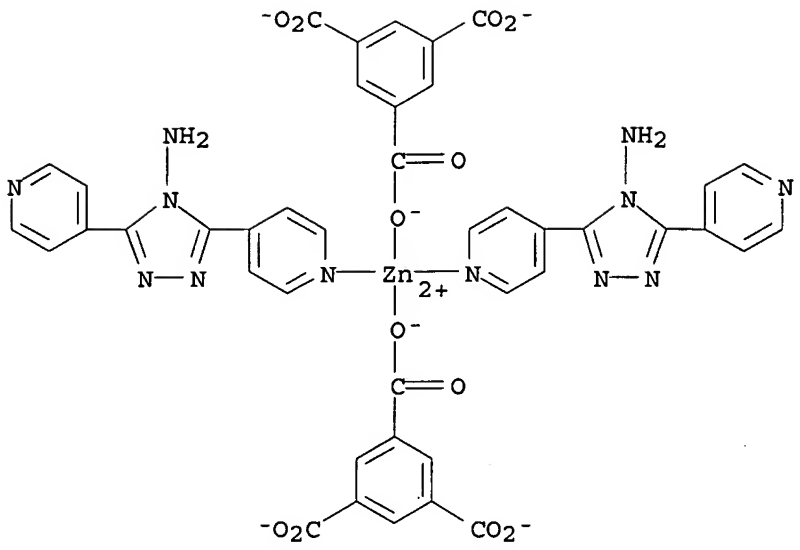


● H^+

●9/4 H_2O

IT 890016-32-7P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation, crystal structure, hydrogen bonding, luminescence and thermal stability of)
RN 890016-32-7 CAPLUS
CN Zincate(4-), bis[1,3,5-benzenetricarboxylato(3-)-κO]bis[3-(4-pyridinyl-κN)-5-(4-pyridinyl)-4H-1,2,4-triazol-4-amine]-, tetrahydrogen, (T-4)- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

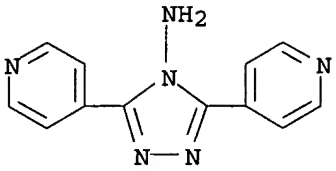
●4 H+

REFERENCE COUNT: 77 THERE ARE 77 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:58796 CAPLUS
DOCUMENT NUMBER: 145:171276
TITLE: Inhibition of mild steel corrosion in phosphoric acid solution by triazole derivatives
AUTHOR(S): Wang, Lin
CORPORATE SOURCE: Department of Chemistry, Yunnan University, Yunnan, 650091, Peop. Rep. China
SOURCE: Corrosion Science (2006), 48(3), 608-616
CODEN: CRRSAA; ISSN: 0010-938X
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Corrosion inhibition by triazole derivs. (n-PAT) on mild steel in phosphoric acid (H3PO4) solns. has been investigated by weight loss and polarization methods. The results indicate that these compds. act as mixed-type inhibitors retarding the anodic and cathodic corrosion reactions with emphasis on the former and do not change the mechanism of either hydrogen evolution reaction or mild steel dissoln. Some kinetic parameters are obtained.

IT 38634-05-8
RL: MOA (Modifier or additive use); USES (Uses)
(inhibition of mild steel corrosion in phosphoric acid solution by triazole derivs.)
RN 38634-05-8 CAPLUS
CN 4H-1,2,4-Triazol-4-amine, 3,5-di-4-pyridinyl- (9CI) (CA INDEX NAME)

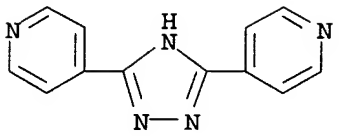


REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1305433 CAPLUS
DOCUMENT NUMBER: 144:204563
TITLE: From One- to Three-Dimensional Architectures: Supramolecular Isomerism of Copper(I) 3,5-Di(4-pyridyl)-1,2,4-triazolate Involving in Situ Ligand Synthesis
AUTHOR(S): Zhang, Jie-Peng; Lin, Yan-Yong; Huang, Xiao-Chun; Chen, Xiao-Ming
CORPORATE SOURCE: State Key Laboratory of Optoelectronic Materials and Technologies, School of Chemistry and Chemical Engineering, Sun Yat-Sen University, Guangzhou, 510275, Peop. Rep. China
SOURCE: Crystal Growth & Design (2006), 6(2), 519-523
CODEN: CGDEFU; ISSN: 1528-7483
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

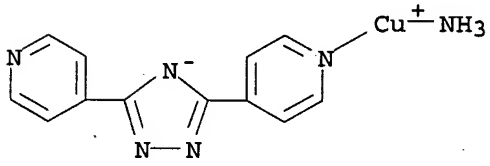
AB Solvothermal treatment of Cu(II) salts, NH3, and 4-cyanopyridine was chosen for the study of supramol. isomerism of the target binary Cu(I) 3,5-di(4-pyridyl)-1,2,4-triazolate (4-pytz). A 2-dimensional coordination network of α-[Cu(4-pytz)] (1, P21/n, a 7.9633(5), b 10.3757(6), c 13.1054(8) Å, β 105.673(1)°) was obtained at 120-160° using Cu(OH)2 or Cu2(OH)2CO3 as the Cu(II) source, while a 3-dimensional network of β-[Cu(4-pytz)] (2, Cc, a 9.4278(5), b 24.7779(14), c 10.6761(6) Å, β 113.025(1)°) was obtained at 100° using Cu(OH)2 as Cu(II) source. A solvated Cu(I) 3,5-di(4-pyridyl)-1,2,4-triazolate [Cu(4-pytz)(NH3)]·4H2O (3, P21/c, a 9.2065(8), b 25.574(2), c 6.8104(6) Å, β 90.256(2)°) with 1-dimensional coordination structure also was synthesized at 100° using the Cu(NO3)2·3H2O as Cu(II) source. Novel H-bonded water-NH3 ribbons comprised of fused (H2O)5 and (H2O)4(NH3) pentagons were stabilized in the 1-dimensional channels of 3. Networks 1 and 2 show structure-related photoluminescence properties, while 3 is nonemissive under UV irritation.

IT 874895-08-6P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(dimorphic; preparation and crystal structure and luminescence of polymeric)
RN 874895-08-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis-, copper(1+) salt (9CI) (CA INDEX NAME)



● Cu(I)

IT 874895-10-0P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure of polymeric)
RN 874895-10-0 CAPLUS
CN Copper, ammine[4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]pyridinato-κN]-, tetrahydrate (9CI) (CA INDEX NAME)



●4 H_2O

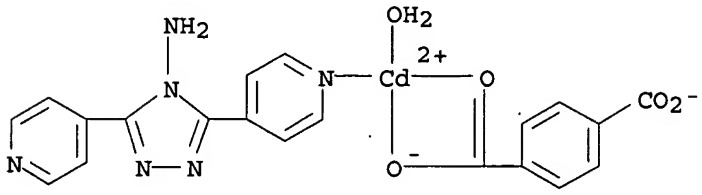
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1198830 CAPLUS
DOCUMENT NUMBER: 144:99881
TITLE: Direction of unusual mixed-ligand metal-organic frameworks: a new type of 3-D polythreading involving 1-D and 2-D structural motifs and a 2-fold interpenetrating porous network
AUTHOR(S): Du, Miao; Jiang, Xiu-Juan; Zhao, Xiao-Jun
CORPORATE SOURCE: College of Chemistry and Life Science, Tianjin Normal University, Tianjin, 300074, Peop. Rep. China
SOURCE: Chemical Communications (Cambridge, United Kingdom) (2005), (44), 5521-5523
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 144:99881
AB The reaction of CuII or CdII acetate with mixed ligands terephthalic (tp) and 3,5-bis(4-pyridyl)-4-amino-1,2,4-triazole (bpt) under the same conditions affords two unusual metal-organic frameworks, in which {[Cu(tp)(bpt)(H2O)]2[Cu(bpt)2(tp)](H2O)2}n (1) represents a new type of polythreaded supramol. architecture consisting of distinct 1-dimensional and 2-dimensional coordination polymers within one crystal, whereas, {[Cd(tp)(bpt)(H2O)]2(DMF)1.5(H2O)}n (2) has an interpenetrating porous network with two similar laterally interlocking 2-dimensional (4,4) layers.
IT 872411-64-8P
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP

(Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(coordination polymer; formation from thermal desorption of guest solvates with retention of framework and re-adsorption of solvates)

RN 872411-64-8 CAPLUS

CN Cadmium, aqua[1,4-benzenedicarboxylato(2-)-κO,κO'][3-(4-pyridinyl)-5-(4-pyridinyl-κN)-4H-1,2,4-triazol-4-amine]-, (T-4)-(9CI) (CA INDEX NAME)



IT 872411-65-9P

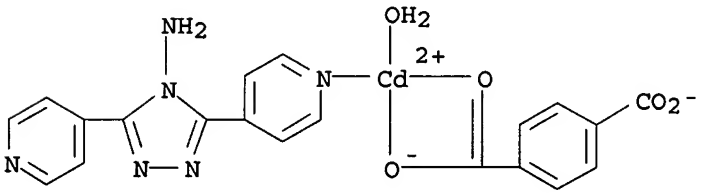
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(coordination polymer; preparation and crystal structure of 2-fold interpenetrating porous network and thermal stability with desorption of solvates)

RN 872411-65-9 CAPLUS

CN Cadmium, aqua[1,4-benzenedicarboxylato(2-)-κO][3-(4-pyridinyl-κN)-5-(-pyridinyl)-4H-1,2,4-triazol-4-amine]-, (T-4)-, compd. with N,N-dimethylformamide (4:3), dihydrate (9CI) (CA INDEX NAME)

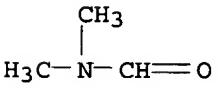
CM 1

CRN 872411-64-8
CMF C20 H16 Cd N6 O5
CCI CCS



CM 2

CRN 68-12-2
CMF C3 H7 N O



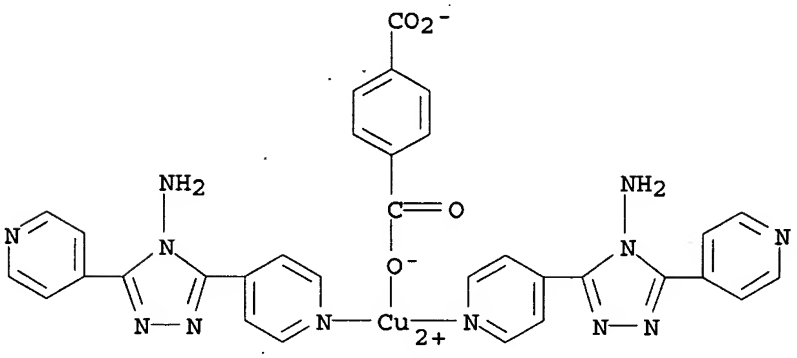
IT 872411-63-7P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(coordination polymer; preparation and crystal structure of 3-D polythreading framework involving 1-D and 2-D structural motifs)

RN 872411-63-7 CAPLUS
CN Copper, aqua[1,4-benzenedicarboxylato(2-)-κO][3-(4-pyridinyl-κN)-5-(4-pyridinyl)-4H-1,2,4-triazol-4-amine]-, compd. with [1,4-benzenedicarboxylato(2-)-κO]bis[3-(4-pyridinyl-κN)-5-(4-pyridinyl)-4H-1,2,4-triazol-4-amine]copper (2:1), dihydrate (9CI) (CA INDEX NAME)

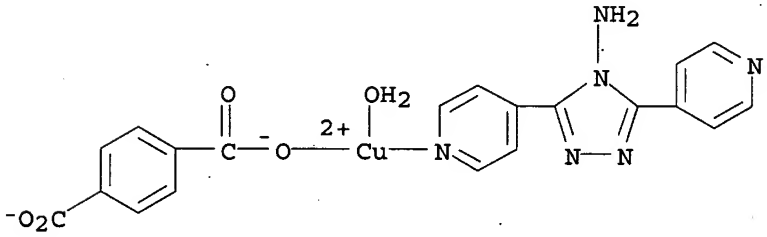
CM 1

CRN 872411-62-6
CMF C32 H24 Cu N12 O4
CCI CCS

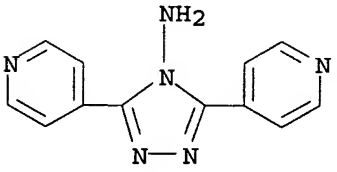


CM 2

CRN 872411-61-5
CMF C20 H16 Cu N6 O5
CCI CCS



IT 38634-05-8, 4-Amino-3,5-bis(4-pyridyl)-1,2,4-triazole
RL: RCT (Reactant); RACT (Reactant or reagent)
(for preparation of cadmium(II) and copper(II) aminobis(pyridyl)triazole terephthalate coordination polymers)
RN 38634-05-8 CAPLUS
CN 4H-1,2,4-Triazol-4-amine, 3,5-di-4-pyridinyl- (9CI) (CA INDEX NAME)



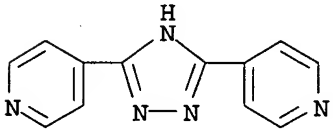
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:971246 CAPLUS
DOCUMENT NUMBER: 143:248341
TITLE: Synthetic pathways to a family of pyridine-containing azoles-promising ligands for coordination chemistry
AUTHOR(S): Nuriev, Vyatsheslav N.; Zyk, Nikolay V.; Vatsadze, Sergey Z.
CORPORATE SOURCE: Organic Chemistry Chair, Chemistry Department, M. V. Lomonosov Moscow State University, Moscow, 119992, Russia
SOURCE: ARKIVOC (Gainesville, FL, United States) (2005), (4), 208-224
CODEN: AGFUAR
URL: http://www.arkat-usa.org/ark/journal/2005/I04_Zefirov/1534/1534.pdf
PUBLISHER: Arkat USA Inc.
DOCUMENT TYPE: Journal; (online computer file)
LANGUAGE: English
OTHER SOURCE(S): CASREACT 143:248341

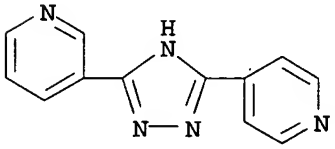
AB A series of pyridine-containing pyrazoles, isoxazoles, imidazoles, oxazoles, thiazoles, oxadiazoles, triazoles, and 1,3,4-triazepines were synthesized as potential conjugated building blocks for the construction of coordination compds.

IT 4329-78-6P 36770-51-1P 863111-90-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of pyridyl-substituted pyrazoles, isoxazoles, imidazoles, oxazoles, thiazoles, oxadiazoles, triazoles and naphthotriazepines)

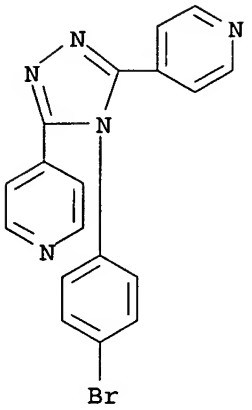
RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



RN 36770-51-1 CAPLUS
CN Pyridine, 3-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 863111-90-4 CAPLUS
CN Pyridine, 4,4'-[4-(4-bromophenyl)-4H-1,2,4-triazole-3,5-diyl]bis- (9CI) (CA INDEX NAME)



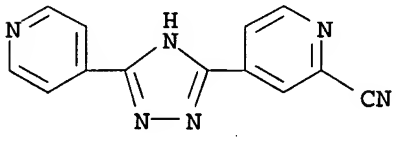
REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:887007 CAPLUS
DOCUMENT NUMBER: 143:399321
TITLE: Simultaneous treatment with citrate prevents nephropathy induced by FYX-051, a xanthine oxidoreductase inhibitor, in rats
AUTHOR(S): Shimo, Takeo; Ashizawa, Naoki; Matsumoto, Koji; Nakazawa, Takashi; Nagata, Osamu
CORPORATE SOURCE: Research Laboratories 2, Fuji Yakuhin Co., Ltd., Nishi-ku, Saitama, 331-0068, Japan
SOURCE: Toxicological Sciences (2005), 87(1), 267-276
CODEN: TOSCF2; ISSN: 1096-6080
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The possible mechanism of the underlying nephropathy found in the rat toxicity study of FYX-051, a xanthine oxidoreductase inhibitor, was investigated. Rats received oral treatment of either 1 or 3 mg/kg of FYX-051, with and without citrate for four weeks to elucidate whether nephropathy could be caused by materials deposited in the kidney. Furthermore, anal. of the renal deposits in rats was also performed. Consequently, interstitial nephritis comprising interstitial inflammatory cell infiltration, dilatation, basophilia and epithelial necrosis of renal tubules and collecting ducts, deposits in renal tubules and collecting ducts, and so forth was seen in six of the eight rats and in all eight rats in the 1 and 3 mg/kg FYX-051 alone groups, resp., with the intensity in the 3 mg/kg group being moderate to severe. In the simultaneous treatment with citrate group, however, no alterations were observed in the kidney, except for minimal interstitial nephritis in one instance in the 3 mg/kg FYX-051 + citrate group along with an increased urinary pH, leading to an increase in xanthine solubility Anal. of intrarenal deposits showed that the entity would be composed of xanthine crystals. The present study, therefore, showed that nephropathy in rats occurring after the administration of FYX-051 was a secondary change caused by xanthine crystals being deposited in the kidney, and no other causes could be implicated in this kidney lesion.

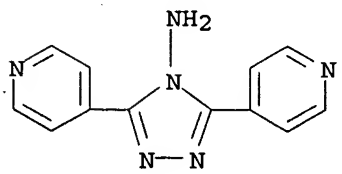
IT 577778-58-6, FYX 051
RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(simultaneous treatment with citrate prevents nephropathy induced by FYX-051 in rats)
RN 577778-58-6 CAPLUS

CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:682212 CAPLUS
DOCUMENT NUMBER: 143:156836
TITLE: LR model of the inhibition mechanism of steel in HCl by triazole and oxadiazole derivatives: structure-activity correlations
AUTHOR(S): Bentiss, F.; Traisnel, M.; Vezin, H.; Lagrenee, M.
CORPORATE SOURCE: Laboratoire de cristallochimie et physicochimie du Solide, CNRS UPRESA 8012, ENSCL, Villeneuve d'ascq, F-59652, Fr.
SOURCE: International Corrosion Congress: Frontiers in Corrosion Science and Technology, 15th, Granada, Spain, Sept. 22-27, 2002 (2002), 378/1-378/8. National Centre for Metallurgical Research: Madrid, Spain.
CODEN: 69FVP4
DOCUMENT TYPE: Conference; (computer optical disk)
LANGUAGE: English
AB A quantum chemical study of the corrosion inhibition efficiency of triazole and oxadiazole derivs., at the mild steel electrode, in molar hydrochloric acid (1M HCl) was carried out. The correlation between the mol. structure and inhibition efficiency of these heterocyclic compds. was investigated using a linear model encompassing the charge transfer resistance (Rt). The linear resistance model (LR) was optimized with the semiempirical quant. structure activity relationships (QSAR) approach. Regression equations, with multiple correlation coeffs. superior at 0.90, were derived between 1/Rt and mol. descriptors. These significant correlations indicated that the variation of the corrosion inhibition with the structure of the inhibitors may be explained in terms of electronic properties.
IT 38634-05-8
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(linear resistance model of inhibition mechanism of steel in HCl by triazole and oxadiazole derivs. and structure-activity correlations)
RN 38634-05-8 CAPLUS
CN 4H-1,2,4-Triazol-4-amine, 3,5-di-4-pyridinyl- (9CI) (CA INDEX NAME)

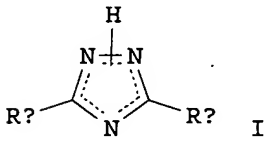


REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:135632 CAPLUS
DOCUMENT NUMBER: 142:240433
TITLE: Preparation of 3-(2-cyanopyridin-4-yl)-1,2,4-triazoles as xanthine oxidase inhibitors
INVENTOR(S): Nakamura, Hiroshi; Ono, Atsushi; Sato, Takahiro; Kaneda, Shuichi
PATENT ASSIGNEE(S): Fuji Yakuhin Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005041802	A	20050217	JP 2003-201480	20030725

PRIORITY APPLN. INFO.: JP 2003-201480 20030725
OTHER SOURCE(S): CASREACT 142:240433; MARPAT 142:240433
GI

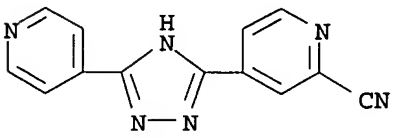


I

AB The title compds. I [Rc = (un)substituted 2-cyanopyridin-4-yl; Rb = (un)substituted pyridyl, phenyl; H atom is attached to any N atom of the triazole ring], their salts, or their hydrates, useful for treatment of hyperuricemia, gout, etc., are prepared by reacting I (Rc = pyridine N-oxide-4-yl which may have substituent at any position except position 2; Rb = same as above) with cyanation agents. Thus, 1.01 g 5-(4-pyridyl-1-oxide)-3-(4-pyridyl)-1,2,4-triazole, prepared from 4-cyanopyridine N-oxide and isonicotinic hydrazide, was suspended in AcNMe2, reacted with Me3SiCN at room temperature for 10 min, and further treated with Me2NCOCl at 60° for 6 h to give 0.79 g HCl salt of 5-(2-cyano-4-pyridyl)-3-(4-pyridyl)-1,2,4-triazole (II). The HCl salt was treated with an aqueous NaHCO3 solution in 2-butanol/H2O to give 0.60 g II. Hyperuricemic effect of II in rats was also shown.

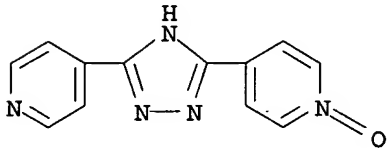
IT 577778-58-6P, 5-(2-Cyano-4-pyridyl)-3-(4-pyridyl)-1,2,4-triazole
RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of (2-cyanopyridyl)triazoles as xanthine oxidase inhibitors from (1-oxypyridyl)triazoles and cyanation agents)

RN 577778-58-6 CAPLUS
CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)

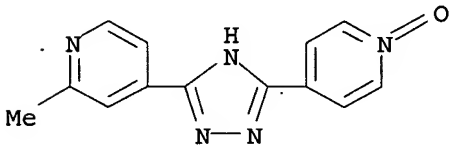


IT 36770-53-3P 837371-86-5P 845513-78-2P,
5-(2-Cyano-4-pyridyl)-3-(4-pyridyl)-1,2,4-triazole hydrochloride
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of (2-cyanopyridyl)triazoles as xanthine oxidase inhibitors from (1-oxypyridyl)triazoles and cyanation agents)

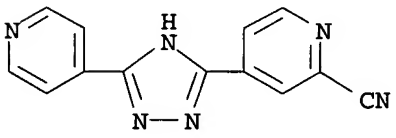
RN 36770-53-3 CAPLUS
CN Pyridine, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 1-oxide (9CI) (CA INDEX NAME)



RN 837371-86-5 CAPLUS
CN Pyridine, 2-methyl-4-[5-(1-oxido-4-pyridinyl)-1H-1,2,4-triazol-3-yl]-(9CI) (CA INDEX NAME)



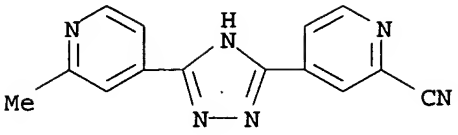
RN 845513-78-2 CAPLUS
CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

IT 845513-79-3P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(preparation of (2-cyanopyridyl)triazoles as xanthine oxidase inhibitors from (1-oxypyridyl)triazoles and cyanation agents)

RN 845513-79-3 CAPLUS
CN 2-Pyridinecarbonitrile, 4-[5-(2-methyl-4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, monohydrochloride (9CI) (CA INDEX NAME)



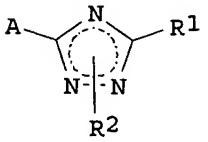
● HCl

L4 ANSWER 10 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:99496 CAPLUS
DOCUMENT NUMBER: 142:198082
TITLE: Process for preparation of 1,2,4-triazole derivatives
INVENTOR(S): Nakamura, Hiroshi; Uda, Junichiro; Ono, Atsushi; Sato, Takahiro
PATENT ASSIGNEE(S): Fujiyakuhin Co., Ltd., Japan
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005009991	A1	20050203	WO 2004-JP10456	20040723
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004259582	A1	20050203	AU 2004-259582	20040723
CA 2531912	A1	20050203	CA 2004-2531912	20040723
EP 1650204	A1	20060426	EP 2004-747845	20040723
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
JP 3779725	B2	20060531	JP 2005-512023	20040723
CN 1826335	A	20060830	CN 2004-80021322	20040723
US 2006189811	A1	20060824	US 2006-565678	20060124

PRIORITY APPLN. INFO.: JP 2003-201286 A 20030724
WO 2004-JP10456 W 20040723

OTHER SOURCE(S): MARPAT 142:198082
GI



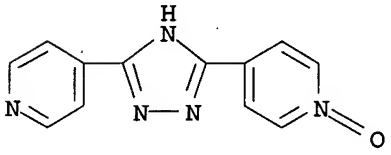
I

AB This invention pertains to a method for producing 1,2,4-triazole derivs. I [wherein A = (un)substituted 1-oxopyridin-4-yl or 2-cyanopyridin-4-yl; R1 = (un)substituted pyridyl or Ph; R2 = H or a protecting group] or salts or hydrates thereof. For example, 4-cyanopyridine-N-oxide was reacted with isonicotinic acid hydrazide in MeOH in the presence of NaOMe to give 5-(1-oxopyridin-4-yl)-3-(pyridin-4-yl)-1,2,4-triazole. The triazole was reacted with benzyl chloromethyl ether in DMAc in the presence of Et3N, followed by the addition of TMSCN to afford 1-(benzyloxymethyl)-5-(2-cyanopyridin-4-yl)-3-(pyridin-4-yl)-1,2,4-triazole. The title compds. inhibit xanthine oxidase and are useful for the treatment of gout and hyperuricemia.

IT 36770-53-3P 837371-71-8P 837371-86-5P
837371-87-6P·837371-88-7P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of 1,2,4-triazole derivs.)

RN 36770-53-3 CAPLUS

CN Pyridine, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 1-oxide (9CI) (CA INDEX NAME)

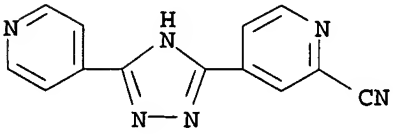


RN 837371-71-8 CAPLUS

CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 4-methylbenzenesulfonate (9CI) (CA INDEX NAME)

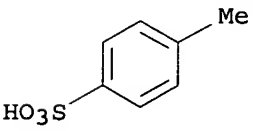
CM 1

CRN 577778-58-6
CMF C13 H8 N6



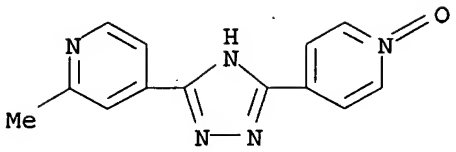
CM 2

CRN 104-15-4
CMF C7 H8 O3 S

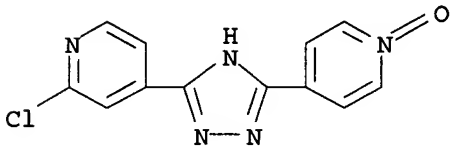


RN 837371-86-5 CAPLUS

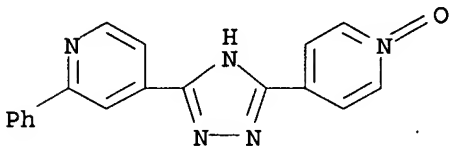
CN Pyridine, 2-methyl-4-[5-(1-oxido-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 837371-87-6 CAPLUS
CN Pyridine, 2-chloro-4-[5-(1-oxido-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)

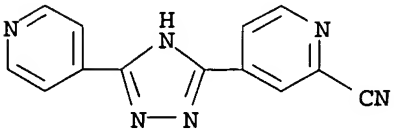


RN 837371-88-7 CAPLUS
CN Pyridine, 4-[5-(1-oxido-4-pyridinyl)-1H-1,2,4-triazol-3-yl]-2-phenyl- (9CI) (CA INDEX NAME)

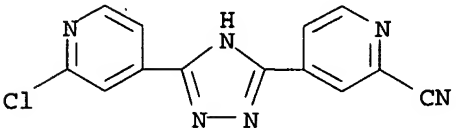


IT 577778-58-6P 577778-84-8P 837371-75-2P
837371-76-3P 837371-77-4P 837371-81-0P
837371-85-4P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(preparation of 1,2,4-triazole derivs.)

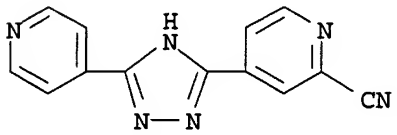
RN 577778-58-6 CAPLUS
CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 577778-84-8 CAPLUS
CN 2-Pyridinecarbonitrile, 4-[5-(2-chloro-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 837371-75-2 CAPLUS
CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, hydrochloride (9CI) (CA INDEX NAME)

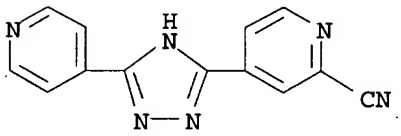


● x HCl

RN 837371-76-3 CAPLUS
CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, sulfate (9CI) (CA INDEX NAME)

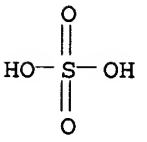
CM 1

CRN 577778-58-6
CMF C13 H8 N6



CM 2

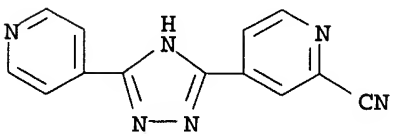
CRN 7664-93-9
CMF H2 O4 S



RN 837371-77-4 CAPLUS
CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, methanesulfonate (9CI) (CA INDEX NAME)

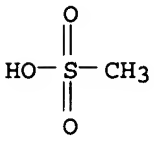
CM 1

CRN 577778-58-6
CMF C13 H8 N6



CM 2

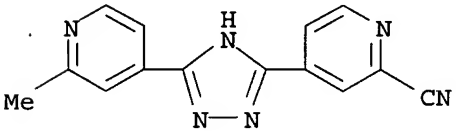
CRN 75-75-2
CMF C H4 O3 S



RN 837371-81-0 CAPLUS
CN 2-Pyridinecarbonitrile, 4-[5-(2-methyl-4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 4-methylbenzenesulfonate (9CI) (CA INDEX NAME)

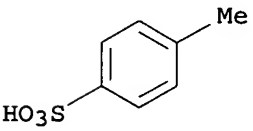
CM 1

CRN 577778-70-2
CMF C14 H10 N6



CM 2

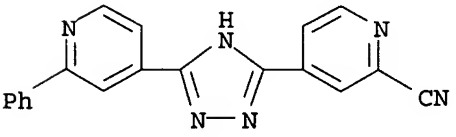
CRN 104-15-4
CMF C7 H8 O3 S



RN 837371-85-4 CAPLUS
CN 2-Pyridinecarbonitrile, 4-[5-(2-phenyl-4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 4-methylbenzenesulfonate (9CI) (CA INDEX NAME)

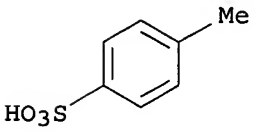
CM 1

CRN 577778-85-9
CMF C19 H12 N6



CM 2

CRN 104-15-4
CMF C7 H8 O3 S



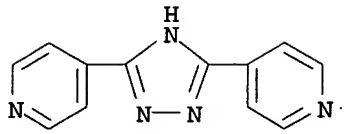
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:1066921 CAPLUS
DOCUMENT NUMBER: 142:176913
TITLE: Organometallic π-tweezers incorporating pyrazine- and pyridine-based bridging units
AUTHOR(S): Al-Anber, M.; Stein, Th.; Vatsadze, S.; Lang, H.
CORPORATE SOURCE: Fakultaet fuer Naturwissenschaften, Lehrstuhl f. Anorganische Chemie, Institut fuer Chemie, Technische Universitaet Chemnitz, Chemnitz, D-09111, Germany
SOURCE: Inorganica Chimica Acta (2005), 358(1), 50-56
CODEN: ICHAA3; ISSN: 0020-1693
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:176913

AB Pyrazine- and pyridine-based π-conjugated σ-donor mols. (LL), such as pyrazine (2a), 4,4'-bipyridine (2b), 1,2-bis(4-pyridyl)ethylene (2c), 3,5-dipyridyl-1,2,4-triazole (2d), N,N'-bis(4-pyridylmethylidene)benzene-1,4-diamine (2e), 2,5-bis(pyridylmethylidene)cyclopentanone (2f), 2,6-bis(4-pyridylmethylidene)cyclohexanone (2g) can successfully be used to span heterobimetallic π-tweezer units [{[Ti](μ-σ,π-C.tplbond.CSiMe3)2}M]+ ([Ti] = (η5-C5H4SiMe3)2Ti; M = Cu, Ag). The thus accessible di-cationic species [{[Ti](μ-σ,π-C.tplbond.CSiMe3)2}M-LL-M{(Me3SiC.tplbond.C-μ-σ,π)2[Ti]}]2+ (4), which are formed via the formation of [{[Ti](μ-σ,π-C.tplbond.CSiMe3)2}M-LL]+ (3) complexes, can be isolated in yields between 66% and 99%. However, when C5H4N-CH:CH-C6H4-CH:CH-NC5H4 (5a) and C5H4N-CH:N-C6H4-CH:CH-NC5H4 (5b), resp., are reacted with {[Ti](μ-σ,π-C.tplbond.CSiMe3)2}AgBF4 (1c) in a 1:1 molar ratio, then the Ag(I) ion is released from the organometallic π-tweezer 1c and coordination polymers [AgBF4·5a]n (6a) and [AgBF4·5b]n (6b) along with [Ti](C.tplbond.CSiMe3)2 (7) are formed in quant. yield.

IT 4329-78-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of titanium heterobimetallic silver or copper π-tweezer complexes containing π-conjugated pyrazine or pyridine-based bridging units and their reactivity)

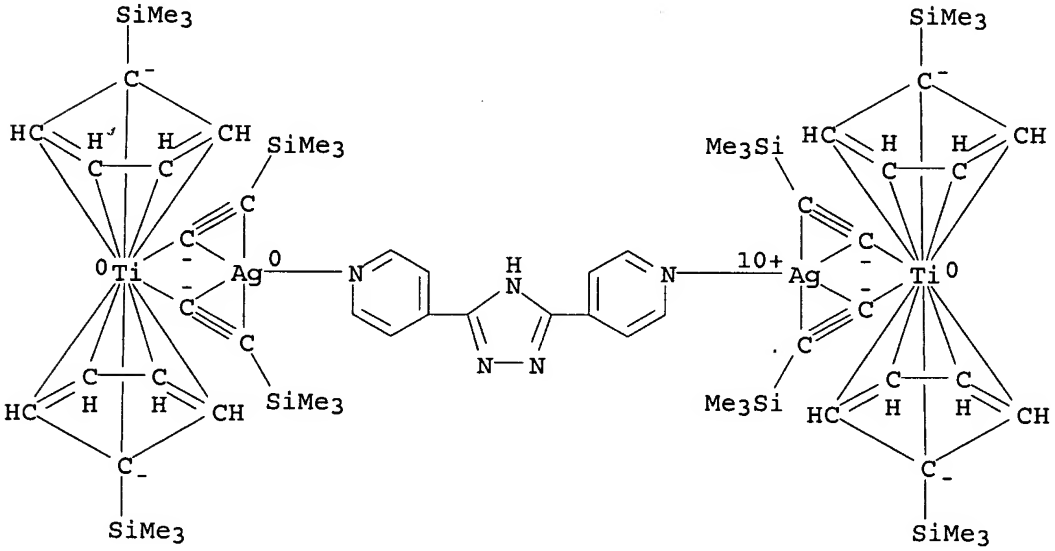
RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



IT 835604-47-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of titanium heterobimetallic silver or copper π-tweezer complexes containing π-conjugated pyrazine or pyridine-based bridging units and their reactivity)
RN 835604-47-2 CAPLUS
CN Titanium(2+), [[μ-[4,4'-(1H-1,2,4-triazole-3,5-diyl)bis[pyridine-κN]]]disilver]tetrakis[(1,2,3,4,5-η)-1-(trimethylsilyl)-2,4-cyclopentadien-1-yl]tetrakis[μ-[(1-η:1,2-η)-(trimethylsilyl)ethynyl]]di-, diperchlorate (9CI) (CA INDEX NAME)

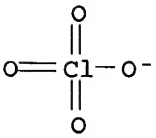
CM 1

CRN 835604-46-1
CMF C64 H97 Ag2 N5 Si8 Ti2
CCI CCS



CM 2

CRN 14797-73-0
CMF Cl O4

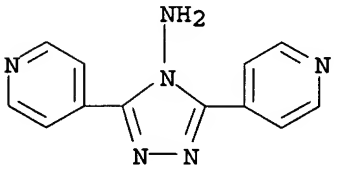


REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:733660 CAPLUS
DOCUMENT NUMBER: 142:210666
TITLE: {[Cu(bipy)2.5(H2O)](ClO4)2·(H2O)·(CH3OH)1.5}n (bipy = 4,4'-bipyridine): organic template effect in formation of a novel bilayer coordination polymer with large chiral channels
AUTHOR(S): Du, Miao; Zhao, Xiao-Jun
CORPORATE SOURCE: College of Chemistry and Life Science, Tianjin Normal University, Tianjin, 300074, Peop. Rep. China
SOURCE: Inorganic Chemistry Communications (2004), 7(9), 1056-1060
CODEN: ICCOFP; ISSN: 1387-7003
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:210666

AB In the presence of the organic template mol., 4-amino-3,5-bis(4-pyridyl)-1,2,4-triazole, a unique acentric coordination polymer based on linear 4,4'-bipyridine (bipy) bridging ligand, {[Cu(bipy)2.5(H2O)](ClO4)2·(H2O)·(MeOH)1.5}n (1), was obtained by the reaction of Cu(II) perchlorate with bipy in H2O/MeOH medium. The bidentate bipy mols. bridge the CuII centers to form a 2-dimensional bilayer framework with an 82·10 topol., and the monodentate bipy ligands, locating up and down each 2-dimensional architecture, are involved in significant aromatic stacking interactions with the adjacent 2-dimensional motifs, resulting in a 3-dimensional porous network with large square channels for including the guest solvents and anions.

IT 38634-05-8, 4-Amino-3,5-bis(4-pyridyl)-1,2,4-triazole
RL: NUU (Other use, unclassified); USES (Uses)
(template for preparation of copper bipyridine aqua coordination polymer containing chiral channels)
RN 38634-05-8 CAPLUS
CN 4H-1,2,4-Triazol-4-amine, 3,5-di-4-pyridinyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 13 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:711167 CAPLUS
DOCUMENT NUMBER: 142:168214
TITLE: Synthesis and Characterization of New Coordination Polymers Generated from Triazole-Containing Organic Ligands and Inorganic Ag(I) Salts
AUTHOR(S): Dong, Yu-Bin; Wang, Hai-Ying; Ma, Jian-Ping; Huang, Ru-Qi; Smith, Mark D.
CORPORATE SOURCE: College of Chemistry Chemical Engineering and Materials Science and Shandong Key Lab of Chemical Functional Materials, Shandong Normal University, Jinan, 250014, Peop. Rep. China
SOURCE: Crystal Growth & Design (2005), 5(2), 789-800
CODEN: CGDEFU; ISSN: 1528-7483
PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:168214

AB The coordination chemical of the triazole-containing rigid crooked tetradentate ligands 3,5-bis(4-pyridyl)-4-amino-1,2,4-triazole (L5) and 3,5-bis(3-pyridyl)-4-amino-1,2,4-triazole (L6) with inorg. Ag(I) salts was studied. Six new coordination polymers were prepared by solution reactions and fully characterized by IR spectroscopy, elemental anal., and single-crystal x-ray diffraction. {[Ag3(L5)2](NO3)3(H2O)4}n (1) (triclinic, space group P.hivin.1; a 6.9481(5), b 9.7267(6), c 12.8803(8) Å, α 92.7760(10), β 99.1170(10), γ 104.4150(10)°, Z = 1) was obtained by the combination of L5 with AgNO3 in a H2O/MeOH mixed solvent system, and features a unique two-dimensional sheet, which consists of large tetrameric and small dimeric rings. The approx. dimensions of the rings are ca. 23 + 6 Å and 4 + 8 Å, resp. {[Ag3(L5)3](PF6)3·(H2O)·(MeOH)}n (2) (monoclinic, space group P21/n; a 10.4641(6), b 15.6701(8), c 31.1907(17) Å, β 94.8840(10)°, Z = 4) was generated from the reaction of L5 with AgPF6 in a H2O/MeOH mixed solvent system. In 2, Ag(I) centers are interlocked together by L5 through two terminal Npyridine and two Ntriazole donors into a novel noninterpenetrating three-dimensional framework with elliptical channels (effective cross-section of .apprx.12.4 + 8.0 Å) along the crystallog. a axis. {[Ag(L5)](ClO4)·H2O}n (3) (triclinic, space group P.hivin.1; a 10.3605(16), b 10.5224(16), c 15.014(2) Å, α 89.979(2), β 76.656(2), γ 89.980(2)°, Z = 4) was obtained by a combination of L5 with AgClO4 in a MeOH/H2O mixed solvent system. In the solid state, it forms a novel noninterpenetrating three-dimensional network with rhombic channels (effective cross-section of .apprx.9.0 + 8.0 Å) along the crystallog. a axis, in which noncoordinated ClO4- anions and H2O guest mols. are located. {[Ag(L6)](ClO4)·MeOH}n (4) (monoclinic, space group C2/c; a 14.1747(10), b 16.2713(11), c 15.9983(11) Å, β 114.9410(10)°, Z = 8) was obtained by the combination of L6 with AgClO4 in a MeOH/H2O mixed solvent system. In the solid state, 4 features a novel noninterpenetrating three-dimensional framework with honeycomb-like and elliptical channels in two different crystallog. directions. Their dimensions are 8 + 7 and 18 + 4 Å, resp. Uncoordinated ClO4- counterions and MeOH guest mols. are located in these channels. {[Ag(L6)](PF6)·MeOH}n (5) is generated from L6 and AgPF6 in a H2O/MeOH mixed solvent system and crystallizes in the space group C2/c, with a 15.2035(10), b 16.5919(11), c 16.1240(10) Å, β 116.8490(10)°, Z = 8. and is isostructural with 4. {[Ag2(C12H10N6)2](SiF6)·2H2O}n (6) (monoclinic, space group P21/c, a 11.3839(6), b 16.5163(8), c 7.4485(4) Å, β 95.5450(10)°, Z = 2) was obtained by the combination of L6 ligand with AgSbF6 in a MeOH/water solvent system. In the solid state, compound 6 adopts a noninterpenetrating two-dimensional net. Uncoordinated SiF62- anions and H2O mols. are located between the layers and further linked by extensive H-bonding systems into a three-dimensional framework. When viewed down the crystallog. [101] direction, honeycomb-like channels were found, in which SiF62- counterions and H2O guest mols. are located.

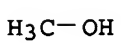
IT 778592-76-0P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure and fluorescence spectra of noninterpenetrating three-dimensional framework with elliptical channels)

RN 778592-76-0 CAPLUS

CN Silver(1+), (3,5-di-4-pyridinyl-4H-1,2,4-triazol-4-amine-κN1)-, hexafluorophosphate(1-), compd. with methanol (3:1), monohydrate (9CI) (CA INDEX NAME)

CM 1

CRN 67-56-1
CMF C H4 O

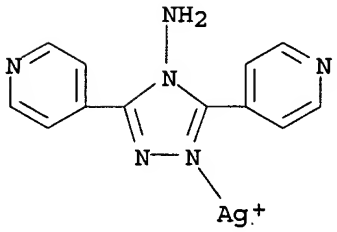


CM 2

CRN 778592-75-9
CMF C12 H10 Ag N6 . F6 P

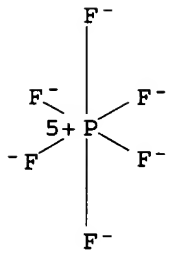
CM 3

CRN 778592-74-8
CMF C12 H10 Ag N6
CCI CCS



CM 4

CRN 16919-18-9
CMF F6 P
CCI CCS



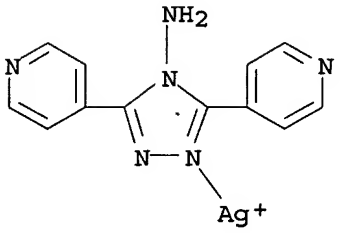
IT 778592-78-2P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure of noninterpenetrating three-dimensional framework with rhombic channels)
RN 778592-78-2 CAPLUS
CN Silver(1+), (3,5-di-4-pyridinyl-4H-1,2,4-triazol-4-amine-κN1)-, perchlorate, monohydrate (9CI) (CA INDEX NAME)

CM 1

CRN 778592-77-1
CMF C12 H10 Ag N6 . Cl O4

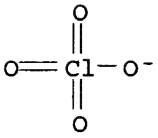
CM 2

CRN 778592-74-8
CMF C12 H10 Ag N6
CCI CCS

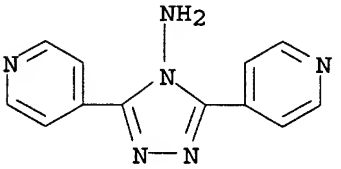


CM 3

CRN 14797-73-0
CMF Cl O4



IT 38634-05-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant for preparation of silver(I) bis(pyridyl)aminotriazole coordination polymers)
RN 38634-05-8 CAPLUS
CN 4H-1,2,4-Triazol-4-amine, 3,5-di-4-pyridinyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 70 THERE ARE 70 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

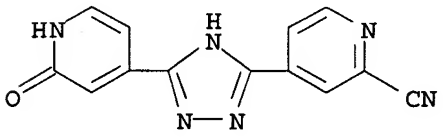
L4 ANSWER 14 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:474117 CAPLUS
DOCUMENT NUMBER: 141:186841
TITLE: The crystal structure of xanthine oxidoreductase during catalysis: Implications for reaction mechanism and enzyme inhibition
AUTHOR(S): Okamoto, Ken; Matsumoto, Koji; Hille, Russ; Eger, Bryan T.; Pai, Emil F.; Nishino, Takeshi
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, Nippon Medical School, Tokyo, 113-8602, Japan
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2004), 101(21), 7931-7936
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences

DOCUMENT TYPE: Journal
LANGUAGE: English

AB Molybdenum is widely distributed in biol. and is usually found as a mononuclear metal center in the active sites of many enzymes catalyzing oxygen atom transfer. The molybdenum hydroxylases are distinct from other biol. systems catalyzing hydroxylation reactions in that the oxygen atom incorporated into the product is derived from water rather than mol. oxygen. Here, we present the crystal structure of the key intermediate in the hydroxylation reaction of xanthine oxidoreductase with a slow substrate, in which the carbon-oxygen bond of the product is formed, yet the product remains complexed to the molybdenum. This intermediate displays a stable broad charge-transfer band at ≈640 nm. The crystal structure of the complex indicates that the catalytically labile Mo-OH oxygen has formed a bond with a carbon atom of the substrate. In addition, the Mo=S group of the oxidized enzyme has become protonated to afford Mo-SH on reduction of the molybdenum center. In contrast to previous assignments, we find this last ligand at an equatorial position in the square-pyramidal metal coordination sphere, not the apical position. A water mol. usually seen in the active site of the enzyme is absent in the present structure, which probably accounts for the stability of this intermediate toward ligand displacement by hydroxide.

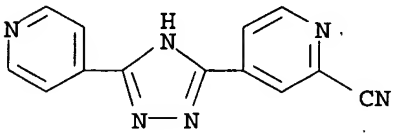
IT 738626-69-2
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(atomic resolution crystallog. structure of xanthine oxidoreductase substrate complex)

RN 738626-69-2 CAPLUS
CN 2-Pyridinecarbonitrile, 4-[5-(1,2-dihydro-2-oxo-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



IT 577778-58-6D, FYX-051, complex with xanthine oxidoreductase
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(atomic resolution crystallog. structure of xanthine oxidoreductase substrate complex)

RN 577778-58-6 CAPLUS
CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 15 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:48216 CAPLUS
DOCUMENT NUMBER: 140:260524
TITLE: Modulation of Heterogeneous Electron-Transfer Dynamics

Across the Electrode/Monolayer Interface

AUTHOR(S): Walsh, Darren A.; Keyes, Tia E.; Forster, Robert J.
CORPORATE SOURCE: National Center for Sensor Research, Dublin City University, Dublin, Ire.

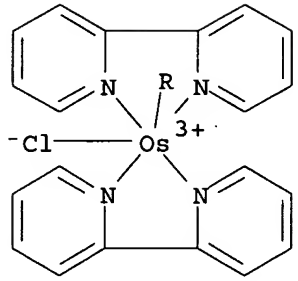
SOURCE: Journal of Physical Chemistry B (2004), 108(8), 2631-2636
CODEN: JPCBFK; ISSN: 1520-6106
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

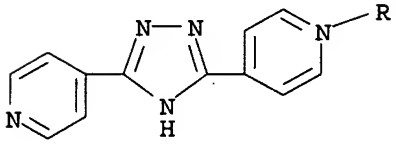
AB Spontaneously adsorbed monolayers of [Os(bpy)24bptCl](PF6) were formed on Pt microelectrodes (bpy is 2,2'-bipyridyl, and 4bpt is 3,5-bis(pyridin-4-yl)-1,2,4-triazole). These monolayers exhibit well-defined, almost ideal electrochem. responses over a wide range of voltammetric scan rates and in a wide range of electrolytic solns. Osmium bipyridine. The surface coverage of these monolayer films is consistent with that expected for a close-packed monolayer, in which the area of occupation is governed by the area of the redox-active headgroup rather than by the bridging ligand. The differential capacitance of the monolayer-modified interface is 18 ± 3 μF cm-2 compared to 35 ± 3 μF cm-2 for an unmodified surface. Consistent with the observation that the formal potential of the Os2+/3+ process shifts by <30 mV upon immobilization, these data suggest that the monolayers are well solvated. The dependence of the differential capacitance on solution pH reveals that the pKa of the triazole bridge within the monolayer, 8.9 ± 0.3, is indistinguishable from that found in solution Chronoamperometry, conducted on a nanosecond time scale, reveals that the redox switching mechanism involves hole rather than electron transfer. Significantly, upon protonation of the 4bpt bridging ligand, the standard heterogeneous hole transfer rate constant decreases from 1.60 to 0.2 + 106 s-1 for the reduction mechanism and from 2.7 to 0.05 + 106 s-1 for the oxidation process. These observations are consistent with the redox mechanism occurring via a hole-transfer process, the rate of which depends on the energy difference between the metal d π orbitals and the HOMO of the bridge. Protonation of the bridging ligand increases this energy gap, resulting in an overall decrease in the rate of the redox reaction.

IT 671788-45-7
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(formal redox potential of adsorbed monolayer on platinum microelectrode in aqueous Na2SO4 solution)

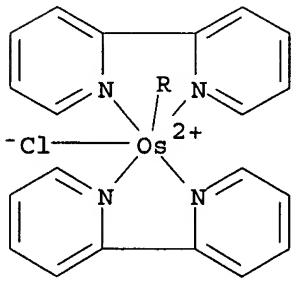
RN 671788-45-7 CAPLUS

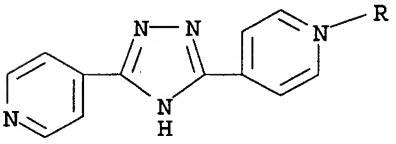
CN Osmium(2+), bis(2,2'-bipyridine-κN1,κN1')chloro[4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]pyridinato-κN]- (9CI) (CA INDEX NAME)





IT 215366-94-2
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(spontaneously adsorbed on platinum microelectrode and modulation of heterogeneous electron-transfer dynamics across electrode/monolayer interface)
RN 215366-94-2 CAPLUS
CN Osmium(1+), bis(2,2'-bipyridine-κN1,κN1')chloro[4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]pyridine-κN]- (9CI) (CA INDEX NAME)





REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

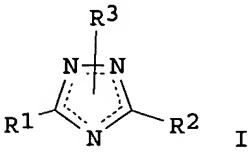
L4 ANSWER 16 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:610439 CAPLUS
DOCUMENT NUMBER: 139:164794
TITLE: Preparation of 1,2,4-triazole derivatives for treatment of hyperuricemia
INVENTOR(S): Nakamura, Hiroshi; Kaneda, Soichi; Sato, Takahiro;

Ashizawa, Naoki; Matsumoto, Koji; Iwanaga, Takashi; Inoue, Tsutomu
PATENT ASSIGNEE(S): Fuji Yakuhin Co., Ltd., Japan
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003064410	A1	20030807	WO 2002-JP12662	20021203
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2462132	A1	20030807	CA 2002-2462132	20021203
BR 2002012775	A	20041013	BR 2002-12775	20021203
EP 1471065	A1	20041027	EP 2002-781876	20021203
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 3600832	B2	20041215	JP 2003-564033	20021203
CN 1561340	A	20050105	CN 2002-819276	20021203
NZ 531673	A	20060630	NZ 2002-531673	20021203
ZA 2004001777	A	20050613	ZA 2004-1777	20040304
NO 2004001075	A	20040315	NO 2004-1075	20040315
KR 2005095317	A	20050929	KR 2004-20648	20040326
IN 2004DN00848	A	20050401	IN 2004-DN848	20040401
US 2005004175	A1	20050106	US 2004-495322	20040511
US 7074816	B2	20060711		

PRIORITY APPLN. INFO.: JP 2002-17825 A 20020128
WO 2002-JP12662 W 20021203

OTHER SOURCE(S): MARPAT 139:164794
GI



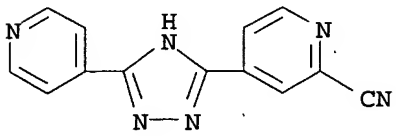
I

AB The title compds. I [R2 represents (un)substituted pyridyl; R1 represents (un)substituted pyridyl, etc.; and R3 represents hydrogen or pivaloyloxy-substituted lower alkyl which is bonded to a nitrogen atom of the 1,2,4-triazole ring] are prepared The bioactivity of compds. of this invention was demonstrated.

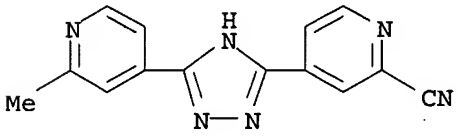
IT 577778-58-6P 577778-70-2P 577778-74-6P
577778-82-6P 577778-84-8P 577778-85-9P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 1,2,4-triazole derivs. for treatment of hyperuricemia)

RN 577778-58-6 CAPLUS

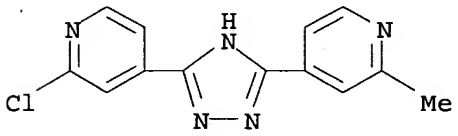
CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



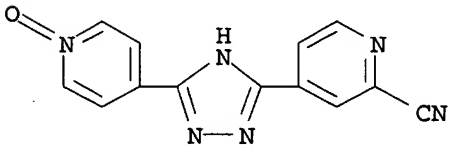
RN 577778-70-2 CAPLUS
CN 2-Pyridinecarbonitrile, 4-[5-(2-methyl-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



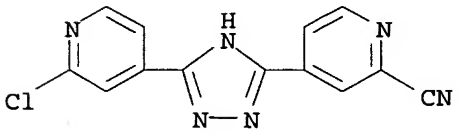
RN 577778-74-6 CAPLUS
CN Pyridine, 2-chloro-4-[5-(2-methyl-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



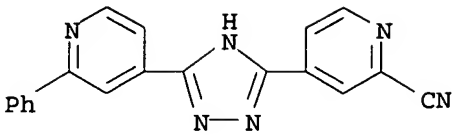
RN 577778-82-6 CAPLUS
CN 2-Pyridinecarbonitrile, 4-[5-(1-oxido-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 577778-84-8 CAPLUS
CN 2-Pyridinecarbonitrile, 4-[5-(2-chloro-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



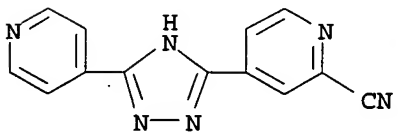
RN 577778-85-9 CAPLUS
CN 2-Pyridinecarbonitrile, 4-[5-(2-phenyl-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



IT 577778-88-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of 1,2,4-triazole derivs. for treatment of hyperuricemia)
RN 577778-88-2 CAPLUS
CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

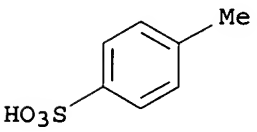
CM 1

CRN 577778-58-6
CMF C13 H8 N6



CM 2

CRN 104-15-4
CMF C7 H8 O3 S



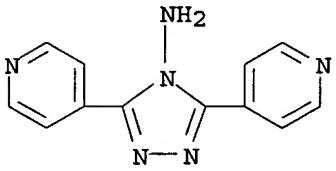
REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 17 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:444294 CAPLUS
DOCUMENT NUMBER: 138:401667
TITLE: An improved procedure for the deamination of symmetrical 3,5-disubstituted 4-amino-1,2,4-triazoles
AUTHOR(S): Bentiss, Fouad; Lagrenee, Michel; Vezin, Herve; Bouanis, Marya; Mernari, Buchaib
CORPORATE SOURCE: Laboratoire de Cristallochimie et Macromoleculaire, CNRS UPRESA, Villeneuve d'Ascq, Fr.
SOURCE: Journal of Heterocyclic Chemistry (2002), 39(1), 93-96
CODEN: JHTCAD; ISSN: 0022-152X
PUBLISHER: HeteroCorporation
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:401667
AB A number of sym. 3,5-disubstituted 4H-1,2,4-triazole have been synthesized in good yields by deamination of the corresponding 4-amino-1,2,4-triazoles

via reductive diazotization of these amino compds. in the presence of hypophosphorous acid. Anal., spectral data, and theor. calcns. confirmed the structures of the new triazole derivs.

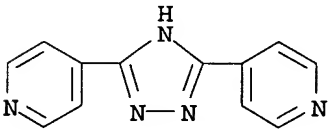
IT 38634-05-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(deamination of sym. 3,5-disubstituted 4-amino-1,2,4-triazoles by reductive diazotization in presence of hypophosphorous acid)

RN 38634-05-8 CAPLUS
CN 4H-1,2,4-Triazol-4-amine, 3,5-di-4-pyridinyl- (9CI) (CA INDEX NAME)



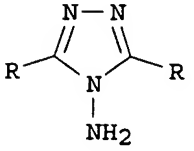
IT 4329-78-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(deamination of sym. 3,5-disubstituted 4-amino-1,2,4-triazoles by reductive diazotization in presence of hypophosphorous acid)

RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 18 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:90594 CAPLUS
DOCUMENT NUMBER: 138:385367
TITLE: A facile and solvent-free synthesis of 3,5-disubstituted 4-amino-1,2,4-triazoles by reactions of aromatic nitriles with hydrazine
AUTHOR(S): Ikemi, Yukio; Hayashi, Naolo; Kakehi, Akikazu; Matsumoto, Ktyoshi
CORPORATE SOURCE: Graduate School of Human and Environmental Studies, Kyoto University, Kyoto, 606-8501, Japan
SOURCE: Heterocyclic Communications (2002), 8(5), 439-442
CODEN: HCOMEX; ISSN: 0793-0283
PUBLISHER: Freund Publishing House Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:385367
GI



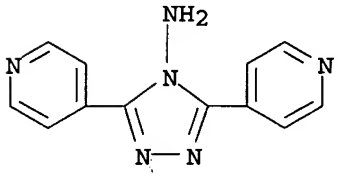
I

AB Triazoles I [R = 2-furanyl, 2-thienyl, indol-5-yl, 9-anthracenyl, (un)substituted phenyl] were prepared from aromatic nitriles and hydrazine monohydrate. The structure of I (R = Ph) was established by x-ray anal.

IT 38634-05-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(solvent-free synthesis of 3,5-disubstituted 4-amino-1,2,4-triazoles by reaction of aromatic nitriles with hydrazine)

RN 38634-05-8 CAPLUS

CN 4H-1,2,4-Triazol-4-amine, 3,5-di-4-pyridinyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 19 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:929802 CAPLUS

DOCUMENT NUMBER: 138:277681

TITLE: Redox switching in solid deposits: triazole bridged osmium dimers

AUTHOR(S): Walsh, Darren A.; Keyes, Tia E.; Forster, Robert J.

CORPORATE SOURCE: School of Chemical Sciences, National Centre for Sensor Research, Dublin City University, Dublin, 9, Ire.

SOURCE: Journal of Electroanalytical Chemistry (2002), 538-539, 75-85
CODEN: JECHES

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Solid deposits of the dimeric complex [Os(bpy)2Cl 4-bpt Os(bpy)2Cl]PF6, where bpy is 2,2'-bipyridyl and bpt is 3,5-bis(pyridin-4-yl)-1,2,4,-triazole have been deposited onto platinum microelectrodes. These layers exhibit unusually ideal electrochem. responses over a wide range of electrolyte compns. and pH values. SEM reveals that repeated switching of the redox composition of these layers does not induce any significant structural change within the deposits. Cyclic voltammetry (CV) has been used to determine the apparent charge transport diffusion coefficient, DCT, describing homogeneous charge transport through the deposit. DCT is independent of the electrolyte concentration suggesting that electron self-exchange between adjacent redox centers limits the overall rate of charge transport through the solid. In 1.0 M LiClO4 and 1.0 M HClO4, DCT values of 2.0±0.1+10-10 and 1.7±0.4+10-10 cm2 s-1 are observed, corresponding to second order electron transfer rate consts. of 1.8+107 and 3.0+107 M-1 s-1, resp. The rate of heterogeneous electron transfer across the electrode | deposit interface has been determined using fast scan CV. The standard heterogeneous electron transfer rate constant, k°, is 1.08±0.05 cm s-1 irresp. of the electrolyte pH. Significantly, this value is less than one order of magnitude smaller than that determined for a monomeric complex containing the same bridging ligand and redox active metal center.

IT 503275-54-5P
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP

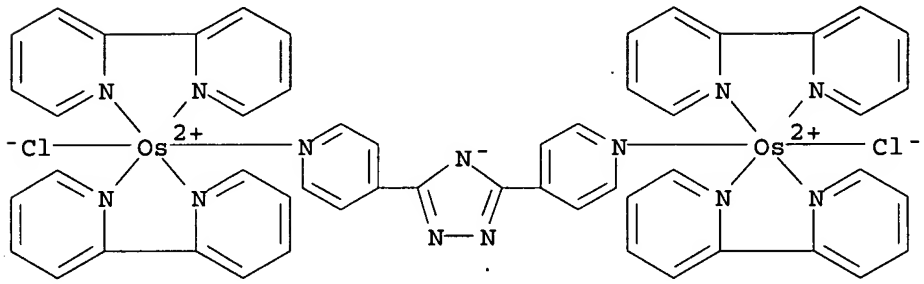
(Preparation); PROC (Process)
(redox switching in solid triazole bridged osmium dimers)

RN 503275-54-5 CAPLUS

CN Osmium(1+), tetrakis(2,2'-bipyridine-κN1,κN1')dichloro[μ-[[4,4'-(1H-1,2,4-triazole-3,5-diyl)bis[pyridinato-κN]](1-)]]di-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

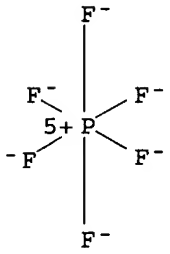
CM 1

CRN 503275-53-4
CMF C52 H40 Cl2 N13 Os2
CCI CCS



CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS



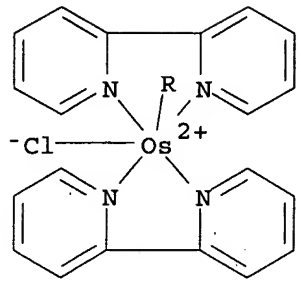
IT 215366-95-3P
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(starting reagent in synthesis of [Os(bpy)2Cl 4-bpt Os(bpy)2Cl]PF6, where bpy is 2,2'-bipyridyl and bpt is 3,5-bis(pyridin-4-yl)-1,2,4,-triazole)

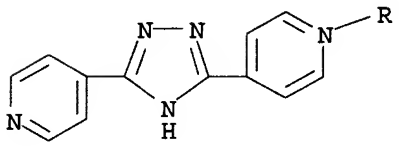
RN 215366-95-3 CAPLUS

CN Osmium(1+), bis(2,2'-bipyridine-κN1,κN1')chloro[4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]pyridine-κN]-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

CM 1

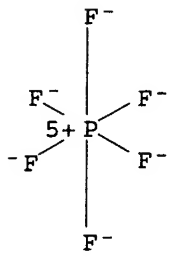
CRN 215366-94-2
CMF C32 H25 Cl N9 Os
CCI CCS





CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 20 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:661848 CAPLUS
DOCUMENT NUMBER: 137:331284
TITLE: 4-Amino-3,5-bis(4-pyridyl)-1,2,4-triazole
AUTHOR(S): Guo, Ya Mei; Du, Miao
CORPORATE SOURCE: Department of Chemistry, Tianjin University, Tianjin, 300072, Peop. Rep. China
SOURCE: Acta Crystallographica, Section E: Structure Reports Online (2002), E58(9), o966-o968
CODEN: ACSEBH; ISSN: 1600-5368
URL: http://journals.iucr.org/e/issues/2002/09/00/ya6117/index.html
PUBLISHER: International Union of Crystallography
DOCUMENT TYPE: Journal; (online computer file)
LANGUAGE: English

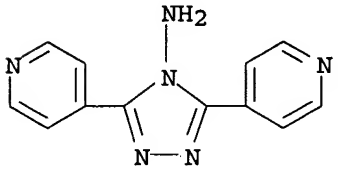
AB Crystals of the title compound are monoclinic, space group P21/c, with a 13.176(4), b 7.125(2), c 11.859(4) Å, β 105.936(6)°; Z = 4, dc = 1.478; R = 0.054, Rw(F2) = 0.180 for 1884 reflections. The two pyridine rings form dihedral angles of 35.7(2) and 16.8(2)° with the central triazole ring. The mols. exist as centrosym. related dimers

and form a three-dimensional network through intermol. N-H...N H bonds.

IT 38634-05-8, 4-Amino-3,5-bis(4-pyridyl)-1,2,4-triazole
RL: PRP (Properties)
(crystal structure of)

RN 38634-05-8 CAPLUS

CN 4H-1,2,4-Triazol-4-amine, 3,5-di-4-pyridinyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 21 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:297949 CAPLUS

DOCUMENT NUMBER: 135:76833

TITLE: Synthesis and crystal structure of 4-(p-methoxyphenyl)-3,5-bis(4-pyridyl)-1,2,4-triazole

AUTHOR(S): Zhu, Dunru; Zhu, Xiaolei; Xu, Li; Shao, Sichang; Raj, S. Shanmuga Sundara; Fun, Hoong-Kun; You, Xiaozeng

CORPORATE SOURCE: Coordination Chemistry Institute, the State Key Laboratory of Coordination Chemistry, Nanjing University, Nanjing, 210093, Peop. Rep. China

SOURCE: Journal of Chemical Crystallography (2000), 30(6), 429-432
CODEN: JCCYEV; ISSN: 1074-1542

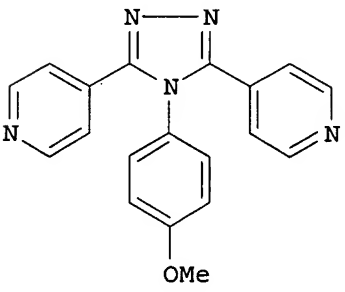
PUBLISHER: Kluwer Academic/Plenum Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 135:76833

GI

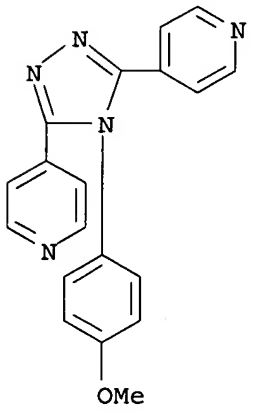


I

AB 4-(4-Methoxyphenyl)-3,5-bis(4-pyridyl)-1,2,4-triazole (I) was synthesized, and its crystal structure was determined by X-ray diffraction methods. I crystallized in the monoclinic space group P21/n, with a = 12.5832(6) Å, b = 7.0512(5) Å, c = 18.4669(12) Å, β = 96.826(1)°, and Dcalc = 1.345 g cm-1 for Z = 4. In the structure, two pyridyl rings, Ph ring, and triazole ring do not share a common plane. The most favored orientation of the pyridyl rings in the crystal is that their planes are inclined toward opposite directions with respect to the triazole ring.

IT 346664-14-0P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure of
4-(p-methoxyphenyl)-3,5-bis(4-pyridyl)-

1,2,4-triazole)
RN 346664-14-0 CAPLUS
CN Pyridine, 4,4'-[4-(4-methoxyphenyl)-4H-1,2,4-triazole-3,5-diyl]bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

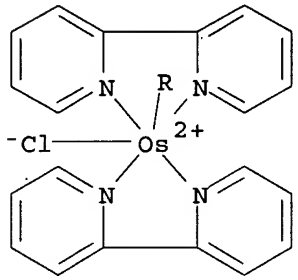
L4 ANSWER 22 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:191458 CAPLUS
DOCUMENT NUMBER: 135:98766
TITLE: Solid deposits of osmium bis-bipyridyl triazole chloride: Redox properties and electrocrystallization
AUTHOR(S): Forster, Robert J.; Keyes, Tia E.
CORPORATE SOURCE: National Centre for Sensor Research, School of Chemical Sciences, Dublin City University, Dublin, Ire.
SOURCE: Physical Chemistry Chemical Physics (2001), 3(7), 1336-1344
CODEN: PPCPFQ; ISSN: 1463-9076
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Mech. attached, solid-state films of [Os(bpy)2(bpt)Cl] were formed on platinum microelectrodes and their voltammetric properties studied, bpy is 2,2'-bipyridyl and bpt is 3,5-bis(pyridin-4-yl)-1,2,4-triazole. SEM reveals that voltammetric cycling in 1.0M HClO4 converts the amorphous array of microscopically small particles into a plate-like semi-crystalline form. In contrast, crystallization does not occur when the films are cycled in 1.0M NaClO4. In both electrolytes, the voltammetric response of these films is reminiscent of that observed for an ideal reversible, solution phase redox couple. Slow and fast scan linear sweep voltammograms were used to provide an absolute determination of the fixed site concentration and apparent diffusion coefficient, Dapp. The fixed site concentration is 1.65 ± 0.05M for films cycled in either electrolyte and the Dapp values increase with increasing electrolyte concentration, Celec. These observations suggest that ion transport rather than the rate of electron self-exchange limit the overall rate of charge transport through these solids. In 1.0M NaClO4, Dapp values for oxidation and reduction are identical at 8.3 ± 0.5 + 10-12 cm2 s-1. In 1.0M HClO4, Dapp is significantly lower and depends on whether the deposit is being oxidized (9.7 ± 0.4 + 10-13 cm2 s-1) or reduced (6.3 ± 0.4 + 10-13 cm2 s-1). These data were used to obtain an

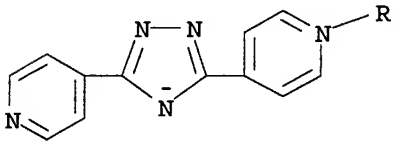
insight into the relative importance of intra- vs. inter-particle charge transport. When Celec>0.5M, the standard heterogeneous electron transfer rate constant, k°, becomes independent of the electrolyte concentration with a value of 1.7 ± 0.2 + 10-5 cm s-1 being observed in both 1.0M NaClO4 and HClO4. Significantly, the distance normalized heterogeneous electron transfer rate constant for these solid state films is almost three orders of magnitude smaller than that found within a spontaneously adsorbed monolayer of the same complex. The importance of these results for the rational design of solid-state redox active materials for battery, display and sensor applications is considered.

IT 215366-93-1
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(cyclic voltammetry of mech. attached solid-state films on platinum electrodes in HClO4 and in NaClO4 solns.: redox properties and electrocrystn.)

RN 215366-93-1 CAPLUS

CN Osmium, bis(2,2'-bipyridine-κN1,κN1')chloro[4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]pyridinato-κN]- (9CI) (CA INDEX NAME)





REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 23 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:184325 CAPLUS

DOCUMENT NUMBER: 135:89700

TITLE: N1-hetarylcarbonyl substituted amidrazone and 3,5-disubstituted 1,2,4-triazole as potential antimycobacterial agents

AUTHOR(S): Ranft, D.; Lehwark-Yvetot, G.; Schaper, K.-J.; Buge, A.

CORPORATE SOURCE: Institut fur Pharmazeutische Chemie, Martin-Luther-Universitat Halle-Wittenberg, Halle, D-06120, Germany

SOURCE: Pharmazie (2001), 56(3), 266
CODEN: PHARAT; ISSN: 0031-7144

PUBLISHER: Govi-Verlag Pharmazeutischer Verlag

DOCUMENT TYPE: Journal

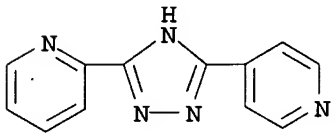
LANGUAGE: German

AB N1-hetarylcarbonyl-substituted amidrazones and 3,5-dihetaryl-1,2,4-triazoles were prepared and characterized. A carbonyl spacer between N1 and the N1-hetaryl substituent led to compds. that were antimycobacterially

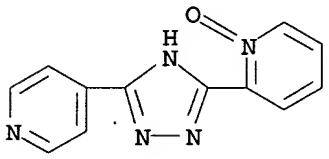
ineffective. Antimycobacterial effectiveness of some 3,5-dihetaryl-1,2,4-triazole derivs. was moderate.

IT 36770-50-0 348624-91-9
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(N1-hetarylcarbonyl substituted amidrazone and 3,5-disubstituted 1,2,4-triazole as potential antimycobacterial agents)

RN 36770-50-0 CAPLUS
CN Pyridine, 2-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 348624-91-9 CAPLUS
CN Pyridine, 2-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 1-oxide (9CI) (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

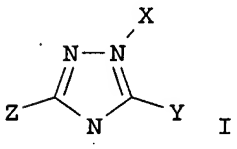
L4 ANSWER 24 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:291026 CAPLUS
DOCUMENT NUMBER: 132:308342
TITLE: Preparation of pyridyl-1,2,4-triazoles as acaricides and insecticides
INVENTOR(S): Tisdell, Francis E.; Johnson, Peter L.; Pechacek, James T.; Bis, Scott J.; Hedge, Vidyadhar B.; Schoonover, Joe R., Jr.; Ripa, Perry V.; Dintenfass, Leonard P.; Gifford, James M.; Thibault, Thomas D.; Ash, Mary L.; Devries, Donald H.; Martin, Timothy P.
PATENT ASSIGNEE(S): Dow Agrosciences Llc, USA
SOURCE: PCT Int. Appl., 68 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000024735	A1	20000504	WO 1999-US24751	19991022

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,

	DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
EP 1123287		A1	20010816	EP 1999-955132		19991022
EP 1123287		B1	20030730			
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
BR 9915534		A	20011009	BR 1999-15534		19991022
US 6413992		B1	20020702	US 1999-425091		19991022
JP 2002528447		T	20020903	JP 2000-578305		19991022
PT 1123287		T	20031231	PT 1999-955132		19991022
ES 2200566		T3	20040301	ES 1999-955132		19991022
PRIORITY APPLN. INFO.:				US 1998-105356P	P	19981023
				WO 1999-US24751	W	19991022

OTHER SOURCE(S): MARPAT 132:308342
GI



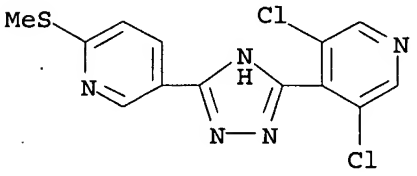
I

AB Title compds. [I; 1 of X,Y = H, alkyl, Ph, etc. and the other = (un)substituted Ph, -pyridyl, -thienyl, etc.; Z = (un)substituted pyridyl] were prepared Thus, 3,5-dichloro-4-pyridinethioamide was S-methylated and the product N-acylated by 2,4-Cl2C6H3COCl to give ZC(SMe):NCOC6H3Cl2-2,4 (Z = 3,5-dichloro-4-pyridyl) which was cyclocondensed with MeNHNH2 to give I (X = Me, Y = C6H3Cl2-2,4, Z = 3,5-dichloro-4-pyridyl). Data for biol. activity of I were given.

IT 265985-45-3P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of pyridyl-1,2,4-triazoles as acaricides and insecticides)

RN 265985-45-3 CAPLUS

CN Pyridine, 3,5-dichloro-4-[5-[6-(methylthio)-3-pyridinyl]-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)

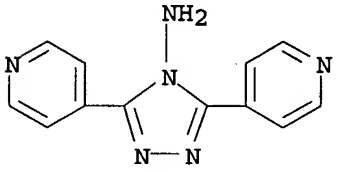


REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 25 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN

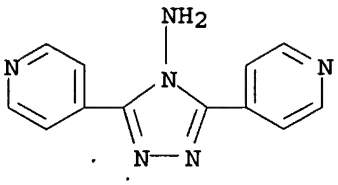
ACCESSION NUMBER:	2000:177112 CAPLUS
DOCUMENT NUMBER:	132:308295
TITLE:	Accelerated synthesis of 3,5-disubstituted 4-amino-1,2,4-triazoles under microwave irradiation
AUTHOR(S):	Bentiss, Fouad; Lagrenee, Michel; Barbry, Didier
CORPORATE SOURCE:	Laboratoire de Cristallochimie et Physicochimie du Solide, CNRS UPRESA 8012, ENSCL, Villeneuve d'Ascq,

F-59652, Fr.
SOURCE: Tetrahedron Letters (2000), 41(10), 1539-1541
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 132:308295
AB Sym. 3,5-disubstituted 4-amino-1,2,4-triazoles are quickly prepared by reaction of aromatic nitriles with hydrazine dihydrochloride in the presence of excess hydrazine hydrate in ethylene glycol under microwave irradiation
IT 38634-05-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(accelerated synthesis of 3,5-disubstituted 4-amino-1,2,4-triazoles under microwave irradiation)
RN 38634-05-8 CAPLUS
CN 4H-1,2,4-Triazol-4-amine, 3,5-di-4-pyridinyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 26 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:216715 CAPLUS
DOCUMENT NUMBER: 130:311743
TITLE: A simple one-step synthesis of new 3,5-disubstituted 4-amino-1,2,4-triazoles
AUTHOR(S): Bentiss, Fouad; Lagrenee, Michel; Traisnel, Michel; Mernari, Bouchaib; Elattari, Hassan
CORPORATE SOURCE: Laboratoire de Cristallochimie et Physicochimie du Solide, Ecole Nationale Superieure de Chimie de Lille (ENSCL), Villeneuve d'Ascq, 59652, Fr.
SOURCE: Journal of Heterocyclic Chemistry (1999), 36(1), 149-152
CODEN: JHTCAD; ISSN: 0022-152X
PUBLISHER: HeteroCorporation
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 130:311743
AB Sym. 3,5-disubstituted 4-amino-1,2,4-triazoles have been prepared by reaction of aromatic nitriles with hydrazine dihydrochloride or sulfate with an excess of hydrazine hydrate in ethylene or diethylene glycol under a nitrogen atmospheric The structures of the new triazoles were confirmed by anal.
and spectral data.
IT 38634-05-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 38634-05-8 CAPLUS
CN 4H-1,2,4-Triazol-4-amine, 3,5-di-4-pyridinyl- (9CI) (CA INDEX NAME)



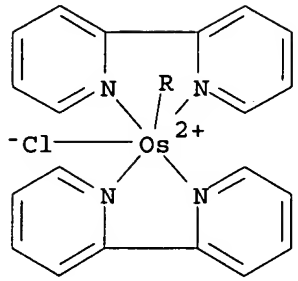
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

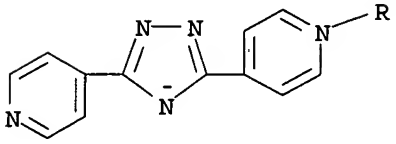
L4 ANSWER 27 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1998:644098 CAPLUS
DOCUMENT NUMBER: 129:348406
TITLE: Hole superexchange across a triazole bridged osmium monolayer/electrode interface
AUTHOR(S): Forster, Robert J.; Vos, Johannes G.; Keyes, Tia E.
CORPORATE SOURCE: School of Chemical Sciences, Dublin City University, Dublin, Ire.
SOURCE: Analyst (Cambridge, United Kingdom) (1998), 123(10), 1905-1911
CODEN: ANALAO; ISSN: 0003-2654
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The effects of electrolyte and temperature on the electrochem. response of spontaneously adsorbed monolayers of [Os(bpy)2bptCl], where bpy is 2,2'-bipyridyl and bpt is 3,5-bis(pyridin-4-yl)-1,2,4-triazole, on clean platinum microelectrodes are reported. While cyclic voltammetry of the Os2+/3+ redox reaction is nearly ideally reversible, the bipyridyl based redns. are reversible only for scan rates .gtorsim.5 V s-1, suggesting that the highly reduced species undergoes a subsequent chemical reaction. The electrolyte concentration dependence of the double layer capacitance, Cdl, was measured for monolayers containing only Os2+ centers at potentials on either side of the potential of zero charge, p.z.c. While the limiting interfacial capacitance observed at high electrolyte concns. is .apprx.25 μF cm-2 for potentials neg. of the p.z.c., it decreases to only 12 μF cm-2 for potentials pos. of the p.z.c. Probably at pos. potentials the monolayers are relatively more perfect and contain less solvent and electrolyte ions. Oxidation of the monolayer to Os3+ causes Cdl to increase by <15%. Probably the phys. location of charges within monolayers (bridge vs. remote redox site) has a profound effect on the double layer structure. Chronoamperometry, conducted on a microsecond time-scale, was used to measure the heterogeneous electron transfer rate constant, k, for the Os2+/3+ redox reaction. For electrolyte concns. >0.1M, redox switching is characterized by a single unimol. rate constant (k/s-1). Tafel plots of the dependence of ln k on overpotential show that the rate consts. for reduction of the Os3+ centers are approx. four times larger than those for oxidation of Os2+ sites within the monolayer for a wide range of overpotentials. This observation is interpreted in terms of a bridge mediated hole superexchange mechanism.

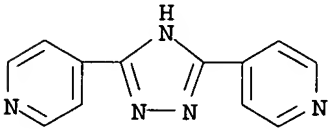
IT 215366-93-1
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(hole superexchange across triazole bridged osmium monolayer/electrode interface)

RN 215366-93-1 CAPLUS
CN Osmium, bis(2,2'-bipyridine-κN1,κN1')chloro[4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]pyridinato-κN]- (9CI) (CA INDEX NAME)





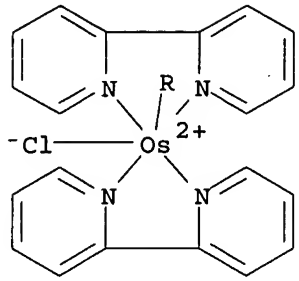
IT 4329-78-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with osmium bipyridine chloro complex)
RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)

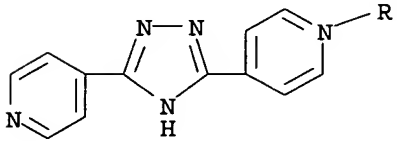


IT 215366-95-3P
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(preparation: hole superexchange across triazole bridged osmium monolayer/electrode interface)
RN 215366-95-3 CAPLUS
CN Osmium(1+), bis(2,2'-bipyridine-κN1,κN1')chloro[4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]pyridine-κN]-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

CM 1

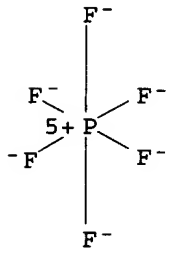
CRN 215366-94-2
CMF C32 H25 Cl N9 Os
CCI CCS





CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS



REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

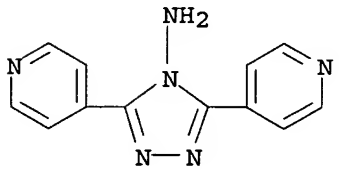
L4 ANSWER 28 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1998:402128 CAPLUS
DOCUMENT NUMBER: 129:70355
TITLE: Inhibiting effects of 3,5-bis(N-pyridyl)-4-amino-1,2,4-triazoles on the corrosion for mild steel in 1 M HCl medium
AUTHOR(S): Mernari, B.; El Attari, H.; Traisnel, M.; Bentiss, F.; Lagrenee, M.
CORPORATE SOURCE: Laboratoire de Chimie de Coordination et d'Analytique, Faculte des Sciences, Universite Chouaib Doukkali, El Jadida, Morocco
SOURCE: Corrosion Science (1998), 40(2/3), 391-399
CODEN: CRRSAA; ISSN: 0010-938X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A new class of corrosion inhibitors, namely, 3,5-bis(n-pyridyl)-4-amino-1,2,4-triazoles (n-PAT) has been synthesized and its inhibiting action on the corrosion of mild steel in 1 M HCl has been investigated by various corrosion monitoring techniques such as corrosion weight loss tests and

electrochem. impedance spectroscopy. The electrochem. study reveals that these compds. are anodic inhibitors. The absorption of (n-PAT) on the steel surface obeys the Langmuir adsorption isotherm.

IT 38634-05-8
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(inhibiting effects of 3,5-bis(N-pyridyl)-4-amino-1,2,4-triazoles on the corrosion for mild steel in 1M HCl medium)

RN 38634-05-8 CAPLUS
CN 4H-1,2,4-Triazol-4-amine, 3,5-di-4-pyridinyl- (9CI) (CA INDEX NAME)

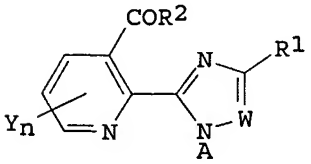


REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 29 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1991:583321 CAPLUS
DOCUMENT NUMBER: 115:183321
TITLE: Preparation of 2-azolylnicotinates as herbicides
INVENTOR(S): Axiotis, Georges; Euvrard, Michel; Guigues, Francois; Tadj, Fatemeh; Pearson, Christopher J.
PATENT ASSIGNEE(S): Rhone-Poulenc Agrochimie, Fr.
SOURCE: Can. Pat. Appl., 76 pp.
CODEN: CPXXEB
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2027347	A1	19910421	CA 1990-2027347	19901015
FR 2653432	A1	19910426	FR 1989-14091	19891020
AU 9064699	A	19910426	AU 1990-64699	19901018
AU 629057	B2	19920924		
EP 429372	A1	19910529	EP 1990-420452	19901018
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
ZA 9008351	A	19910828	ZA 1990-8351	19901018
JP 03151377	A	19910627	JP 1990-283262	19901019
CN 1051040	A	19910501	CN 1990-108601	19901020
HU 55378	A2	19910528	HU 1990-6524	19901020
BR 9005406	A	19910917	BR 1990-5406	19901022
PRIORITY APPLN. INFO.:			FR 1989-14091 A	19891020

OTHER SOURCE(S): MARPAT 115:183321
GI



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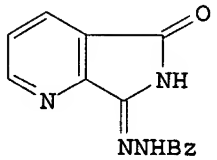


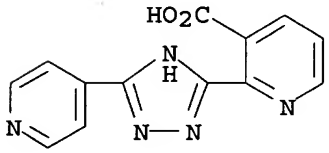
II

AB The title compds. [I; A = H, R7SO2; R1 = H, (un)substituted (cyclo)alkyl, (hetero)aryl, aralkyl; R2 = X1M, X2R5, NR3R4, OR1; M = cation; R3, R4 = H, (un)substituted (cyclo)alkyl, aryl, aralkyl; R5 = groups cited for R1, alkenyl, alkynyl; R7 = (un)substituted (cyclo)alkyl, aryl, aralkyl, NR8R9; R8, R9 = groups cited for R1; NR8R9 = heterocyclyl; W = N, CR10; R10 = groups cited for R1; or R1R10 = atoms to form a fused ring; X1, X2 = O, S; Y = halo, alkyl, alkoxy, etc.; n = 0-3] were prepared Thus, BzNHNH2 was condensed with Et 2-cyanonicotinate to give hydrazonopyrrrolopyridine II which was refluxed 3 h with aqueous KOH to give I (A = H, R1 = Ph, R2 = OH, W = N, n = 0) which was converted in 4 steps to I (A = Me2NSO2, R1 = Ph, R2 = OH, W = N, n = 0). I.Me2CHNH2 (A = Me2SO2, R1 = 2,4-Cl2C6H3, R2 = OH, W = N, n = 0) gave complete control of 5 weeds, e.g., Echinochloa crusgalli, at 4 kg/ha preemergent.

IT 136555-59-4P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of, as herbicide)

RN 136555-59-4 CAPLUS

CN 3-Pyridinecarboxylic acid, 2-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



L4 ANSWER 30 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1988:112349 CAPLUS

DOCUMENT NUMBER: 108:112349

TITLE: Studies on thio amides and their derivatives. VI. New synthesis of 5-membered heterocyclic compounds

AUTHOR(S): Santus, Maria

CORPORATE SOURCE: Dep. Biochem. Gen. Chem., Acad. Med., Bydgoszcz, 85-092, Pol.

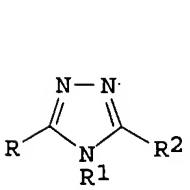
SOURCE: Liebigs Annalen der Chemie (1988), (2), 179-82
CODEN: LACHDL; ISSN: 0170-2041

DOCUMENT TYPE: Journal

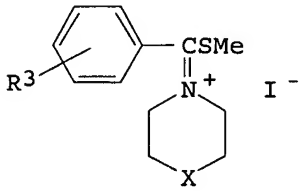
LANGUAGE: English

OTHER SOURCE(S): CASREACT 108:112349

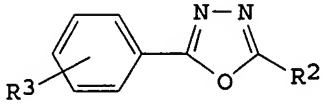
GI



II



III



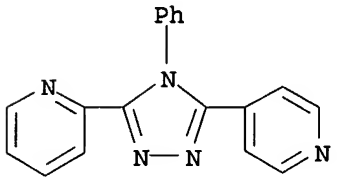
IV

AB Cyclocondensation of thio amides RC(S)NHR1 (R = 2-pyridyl, R1 = 2-pyridyl, Ph; R = p-Me2NPh, R1 = Ph) with acid hydrazides R2CONHNH2 (I; R2 = Ph, o-HOC6H4, 4-pyridyl) in pyridine affords 29-60% triazoles II (same R-R2) via intermediate R1NHCR:NNHCOR2, which is isolated for the case R = R1 = 2-pyridyl, R2 = o-HOC6H4 from a reaction in EtOH. Cyclocondensation of I (same R2) with N,N-disubstituted thio amide quaternary salts III (R3 = H, o-HO, m-Cl, p-Br, p-O2N, p-Me2N; X = O, CH2) in pyridine affords aryloxadiazoles IV (same R2, R3).

IT 111997-51-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 111997-51-4 CAPLUS

CN Pyridine, 2-[4-phenyl-5-(4-pyridinyl)-4H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



L4 ANSWER 31 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1977:171340 CAPLUS

DOCUMENT NUMBER: 86:171340

TITLE: 1,2,4-Triazoles. VII. Methylation of 1,2,4-triazoles

AUTHOR(S): Uda, Masayuki; Hisazumi, Yukinori; Sato, Koji; Kubota, Seiju

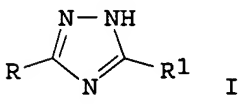
CORPORATE SOURCE: Fac. Pharm. Sci., Univ. Tokushima, Tokushima, Japan

SOURCE: Chemical & Pharmaceutical Bulletin (1976), 24(12), 3103-8
CODEN: CPBTAL; ISSN: 0009-2363

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



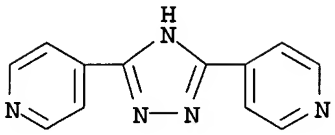
I

AB Twenty-five sym. or unsym. substituted triazoles (I; R, R1 = H, Me, 2-, 3-pyridyl, MeS, Me2CH, p-R2C6H4, R2 = H, Cl, O2N) were methylated with MeI or CH2N2. The sym. substituted and monosubstituted I gave almost exclusively the 1-Me derivs. because of the α-effect of the 1,2-diaza structure or less steric hindrance, resp. However, I (R = 2-pyridyl, R1 = H) gave predominantly the 2-Me derivative due to the space effect of the pyridyl group. Methylation of 3,5-disubstituted I occurred predominantly at the N next to the electron-releasing substituent, but I (R = 2-pyridyl) were methylated mainly at the N next to the pyridyl group.

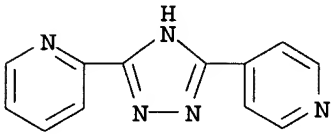
IT 4329-78-6 36770-50-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(methylation of)

RN 4329-78-6 CAPLUS

CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



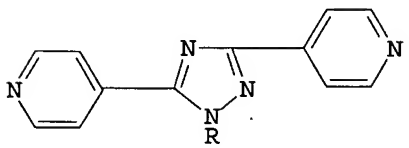
RN 36770-50-0 CAPLUS
CN Pyridine, 2-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



L4 ANSWER 32 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1977:16680 CAPLUS
DOCUMENT NUMBER: 86:16680
TITLE: 1,3,5-Trisubstituted 1,2,4-triazole compounds used as bronchodilators
INVENTOR(S): Baldwin, John J.; Novello, Frederick C.
PATENT ASSIGNEE(S): Merck and Co., Inc., USA
SOURCE: U.S., 4 pp. Division of U.S. 3,882,134.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3984558	A	19761005	US 1974-527994	19741129
US 3882134	A	19750506	US 1973-361914	19730521
NL 7406067	A	19741125	NL 1974-6067	19740506
SE 410458	B	19791015	SE 1974-6196	19740509
GB 1428626	A	19760317	GB 1974-21830	19740516
FR 2230357	A1	19741220	FR 1974-17249	19740517
CH 599195	A5	19780512	CH 1974-6838	19740517
JP 50025569	A	19750318	JP 1974-59269	19740521

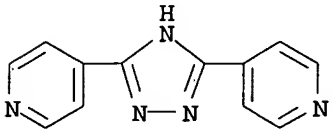
PRIORITY APPLN. INFO.: US 1973-361914 A3 19730521
GI



I

AB Triazoles I (R = CH2CH2CN, CH2CH2CO2H, CH2Ph, CH2C6H4SO2NPr2-4, CH2C6H4NO2-4, CH2C6H4Cl-3, CH2CH(OH)CH2OH, CH2C6H4Cl-4, (CH2)3OH, CH2CH2OH, CH2CH2NEt2, CH2CH2Ph, 3-picolyl, 4-picolyl, morpholinoethyl, piperidinoethyl) were prepared by substitution in I (R = H).

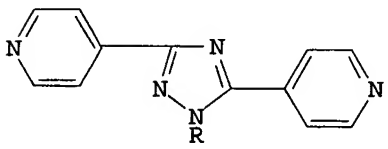
IT 4329-78-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(alkylation of)
RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



L4 ANSWER 33 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1976:577435 CAPLUS
DOCUMENT NUMBER: 85:177435
TITLE: 1,3,5-Trisubstituted 1,2,4-triazole compounds
INVENTOR(S): Baldwin, John J.; Novello, Frederick C.
PATENT ASSIGNEE(S): Merck and Co., Inc., USA
SOURCE: U.S., 3 pp. Division of U.S. 3,928,361.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

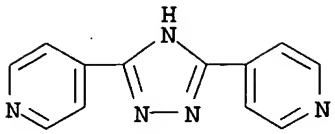
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3978054	A	19760831	US 1975-599504	19750728
US 3882134	A	19750506	US 1973-361914	19730521
US 3928361	A	19751223	US 1974-527992	19741129
US 4048183	A	19770913	US 1976-672899	19760402
PRIORITY APPLN. INFO.:			US 1973-361914 A3	19730521
			US 1974-527992 A3	19741129
			US 1975-599504 A3	19750728

OTHER SOURCE(S): MARPAT 85:177435
GI



I

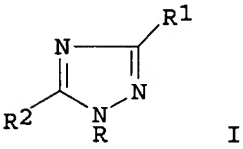
AB Bronchodilatory (no data) triazoles I [R = CH2CH2CN, CH2CH2CO2H, CH2Ph, 4-Pr2NSO2C6H4CH2, 4-O2NC6H4CH2, 3-ClC6H4CH2, 3-pyridylmethyl, 4-pyridylmethyl, HOCH2CH(OH)CH2, 4-ClC6H4CH2, HO(CH2)3, HOCH2CH2, morpholinoethyl, Et2NCH2CH2, piperidinoethyl, PhCH2CH2] were prepared by substitution of I (R = H).
IT 4329-78-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(alkylation of)
RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



L4 ANSWER 34 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1976:577430 CAPLUS
DOCUMENT NUMBER: 85:177430
TITLE: Pyridyl-containing 1-benzenesulfonyl triazoles
INVENTOR(S): Novello, Frederick C.; Baldwin, John J.
PATENT ASSIGNEE(S): Merck and Co., Inc., USA
SOURCE: U.S., 7 pp. Division of U.S. 3,892,762.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3963731	A	19760615	US 1975-547847	19750206
US 3892762	A	19750701	US 1973-361915	19730521
US 4111944	A	19780905	US 1977-808575	19770621
PRIORITY APPLN. INFO.:			US 1970-75784 A2	19700925
			US 1973-361915 A3	19730521
			US 1975-547848 A1	19750206
			US 1976-742945 A1	19761118

GI

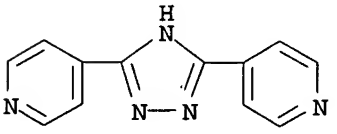


I

AB Uricosuric (no data) triazoles I (R = H, COPr, Me, SO2Ph, CONMe2, Pr, CH2C.tplbond.CH, allyl, Et, CHMe2, Bu; R1 = 2-methyl-4-pyridyl, 2,6-dimethyl-4-pyridyl, 2- and 3-pyridyl, 4-tolyl, 4-pyridyl N-oxide, 4-ClC6H4, Ph; R2 = pyridyl, 2-methyl-4-pyridyl, 2,6-dimethyl-4-pyridyl, , 4-pyridyl N-oxide) (30 compds.) were prepared Thus, 4-cyanopyridine was condensed with 2-methylisonicotinoylhydrazine to give I (R = H, R1 = 2-methyl-4-pyridyl, R2 = 4-pyridyl).

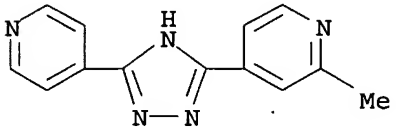
IT 4329-78-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation of)

RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)

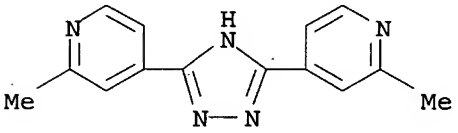


IT 36770-45-3P 36770-46-4P 36770-47-5P
36770-48-6P 36770-50-0P 36770-53-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

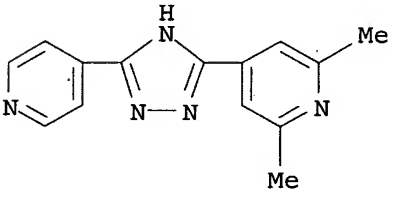
RN 36770-45-3 CAPLUS
CN Pyridine, 2-methyl-4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



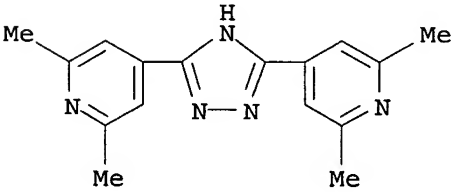
RN 36770-46-4 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis[2-methyl- (9CI) (CA INDEX NAME)



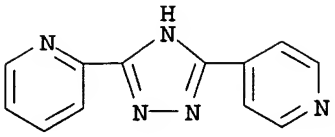
RN 36770-47-5 CAPLUS
CN Pyridine, 2,6-dimethyl-4-[5-(4-pyridinyl-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



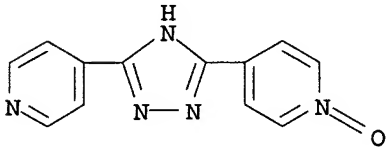
RN 36770-48-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis[2,6-dimethyl- (9CI) (CA INDEX NAME)



RN 36770-50-0 CAPLUS
CN Pyridine, 2-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



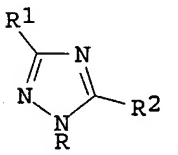
RN 36770-53-3 CAPLUS
CN Pyridine, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 1-oxide (9CI) (CA INDEX NAME)



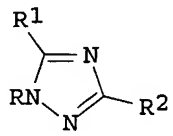
L4 ANSWER 35 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1976:184927 CAPLUS
DOCUMENT NUMBER: 84:184927
TITLE: Antihyperuricemia composition
INVENTOR(S): Baldwin, John J.; Novello, Frederick C.
PATENT ASSIGNEE(S): Merck and Co., Inc., USA
SOURCE: U.S., 7 pp. Division of U.S. 3,892,762.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3947577	A	19760330	US 1975-539488	19750108
US 3892762	A	19750701	US 1973-361915	19730521
US 4111944	A	19780905	US 1977-808575	19770621
PRIORITY APPLN. INFO.:			US 1970-75784 A2	19700925
			US 1973-361915 A3	19730521
			US 1975-547848 A1	19750206
			US 1976-742945 A1	19761118

OTHER SOURCE(S): MARPAT 84:184927
GI



I



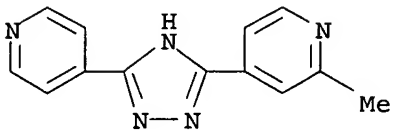
II

AB 3,5-Disubstituted-1,2,4-triazoles, I and II where R = H, lower alkyl, lower alkanoyl, benzenesulfonyl, carbamoyl, or lower alkylcarbamoyl, R1 = Ph, lower alkylphenyl, pyridyl, or lower alkylpyridyl, and R2 = pyridyl or lower alkylpyridyl, are useful antigout and antihyperuricemia agents. The synthesis and pharmaceutical formulations of the triazoles were described. E.g., 0.4 g Na was added to 8.3 g 4-cyanopyridine [100-48-1] in MeOH and

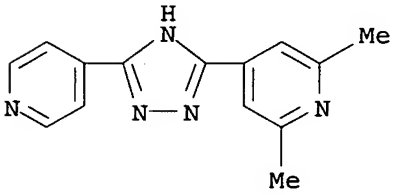
to this was added 0.07 mole 2-methylisonicotinic acid hydrazide [3758-59-6] in 160 ml MeOH to give 5-(4-pyridyl)-3-(2-methyl-4-pyridyl)-1,2,4-triazole [36770-45-3], m. 245-8°. Capsules containing 250 mg 3-phenyl-5-(4-pyridyl)-1,2,4-triazole [23164-60-5], 93 mg lactose, and 7 mg talc were prepared

IT 36770-45-3 36770-47-5 36770-48-6
36770-50-0 36770-53-3
RL: BIOL (Biological study)
(antigout and antihyperuricemic agent)

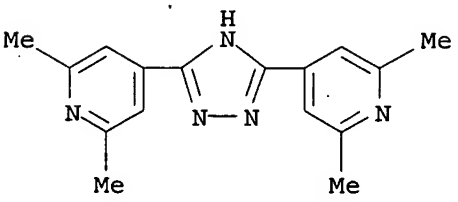
RN 36770-45-3 CAPLUS
CN Pyridine, 2-methyl-4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



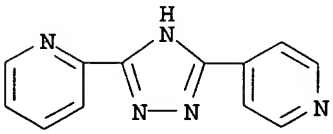
RN 36770-47-5 CAPLUS
CN Pyridine, 2,6-dimethyl-4-[5-(4-pyridinyl-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 36770-48-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis[2,6-dimethyl- (9CI) (CA INDEX NAME)

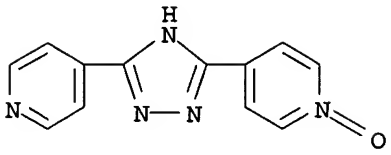


RN 36770-50-0 CAPLUS
CN Pyridine, 2-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)

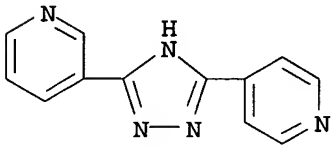


RN 36770-53-3 CAPLUS
CN Pyridine, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 1-oxide (9CI) (CA

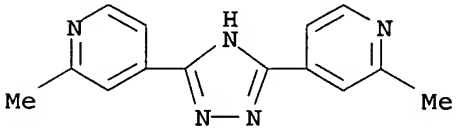
INDEX NAME)



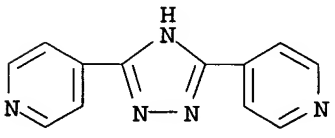
IT 36770-51-1
RL: BIOL (Biological study)
(in tablets, as antigout and antihyperuricemic agent)
RN 36770-51-1 CAPLUS
CN Pyridine, 3-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



IT 36770-46-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 36770-46-4 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis[2-methyl- (9CI) (CA INDEX NAME)



IT 4329-78-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with butyric anhydride)
RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



L4 ANSWER 36 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1976:74275 CAPLUS
DOCUMENT NUMBER: 84:74275
TITLE: 1-(Sulfamoylphenylalkyl)-3,5-dipyridyl-1,2,4 triazoles
INVENTOR(S): Baldwin, John J.; Novello, Frederick C.
PATENT ASSIGNEE(S): Merck and Co., Inc., USA
SOURCE: U.S., 3 pp. Division of U.S. 3,882,134.

CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3928361	A	19751223	US 1974-527992	19741129
US 3882134	A	19750506	US 1973-361914	19730521
NL 7406067	A	19741125	NL 1974-6067	19740506
SE 410458	B	19791015	SE 1974-6196	19740509
GB 1428626	A	19760317	GB 1974-21830	19740516
FR 2230357	A1	19741220	FR 1974-17249	19740517
CH 599195	A5	19780512	CH 1974-6838	19740517
JP 50025569	A	19750318	JP 1974-59269	19740521
US 3978054	A	19760831	US 1975-599504	19750728
US 4048183	A	19770913	US 1976-672899	19760402

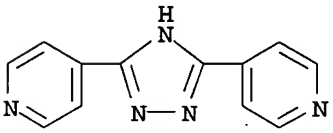
PRIORITY APPLN. INFO.: US 1973-361914 A3 19730521
US 1974-527992 A3 19741129
US 1975-599504 A3 19750728

GI For diagram(s), see printed CA Issue.

AB Seventeen triazoles [I; R = 3-, 4-pyridyl; R1 = NCCH2CH2, PhCH2, p-[(C3H7)2NSO2]C6H4CH2, p-O2NC6H4CH2, HO(CH2)3, 2-morpholinoethyl, etc.], useful in the treatment of asthma, the symptoms of allergy and in some instances in gout and hyperuricemia (no data), were prepared by alkylation of I (R as before; R1 = H). Thus, I (R = 4-pyridyl, R1 = H) was converted to Na salt by heating with NaH in THF and the Na salt was treated with PhCH2Cl in DMF to give I (R = 4-pyridyl, R1 = PhCH2). I (R = 4-pyridyl, R1 = NCCH2CH2) was hydrolyzed to the corresponding acid.

IT 4329-78-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(alkylation of)

RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)

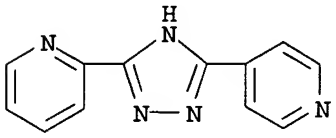


L4 ANSWER 37 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1976:59317 CAPLUS
DOCUMENT NUMBER: 84:59317
TITLE: 1,2,4-Triazol-3-ylpyridines
AUTHOR(S): Browne, Elaine J.
CORPORATE SOURCE: Dep. Chem., Univ. Tasmania, Hobart, Australia
SOURCE: Australian Journal of Chemistry (1975), 28(11), 2543-6
CODEN: AJCHAS; ISSN: 0004-9425
DOCUMENT TYPE: Journal
LANGUAGE: English

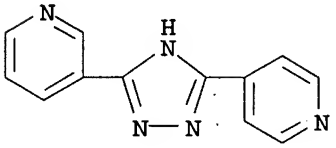
AB A series of N-unsubstituted 1,2,4-triazol-3-ylpyridines was prepared for antiarthritic testing. Weak and scattered antiinflammatory activity was observed, with no clear structure-activity relationships. Some of the compds., notably the 5-pyridyl-1,2,4-triazole-3-carboxylic acids, showed infrared bands characteristic of strong H bonding.

IT 36770-50-0P 36770-51-1P 36770-53-3P
59282-64-3P 59282-65-4P 59282-66-5P
RL: SPN (Synthetic preparation); PREP (Preparation)

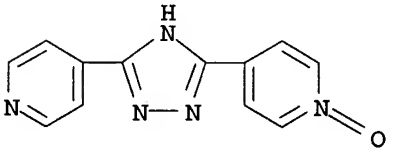
(preparation of)
RN 36770-50-0 CAPLUS
CN Pyridine, 2-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



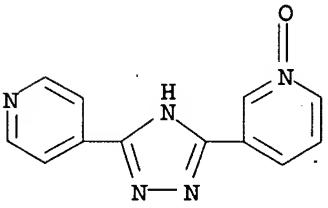
RN 36770-51-1 CAPLUS
CN Pyridine, 3-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



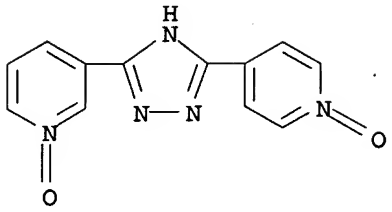
RN 36770-53-3 CAPLUS
CN Pyridine, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 1-oxide (9CI) (CA INDEX NAME)



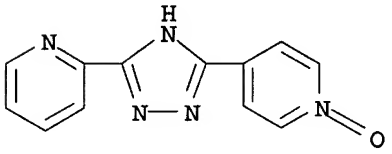
RN 59282-64-3 CAPLUS
CN Pyridine, 3-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 1-oxide (9CI) (CA INDEX NAME)



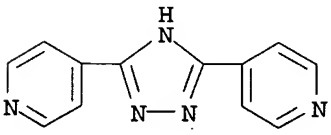
RN 59282-65-4 CAPLUS
CN Pyridine, 3-[5-(1-oxido-4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 1-oxide (9CI) (CA INDEX NAME)



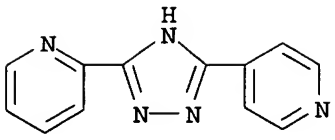
RN 59282-66-5 CAPLUS
CN Pyridine, 2-[5-(1-oxido-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



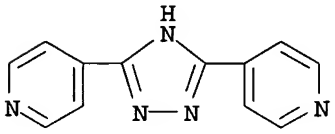
L4 ANSWER 38 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1976:29998 CAPLUS
DOCUMENT NUMBER: 84:29998
TITLE: 1,2,4-Triazoles. V. Nuclear magnetic resonance study of N-methyl derivatives of 1,2,4-triazoles
AUTHOR(S): Kubota, Seiju; Uda, Masayuki; Nakagawa, Toshiro
CORPORATE SOURCE: Fac. Pharm. Sci., Univ. Tokushima, Tokushima, Japan
SOURCE: Journal of Heterocyclic Chemistry (1975), 12(5), 855-60
CODEN: JHTCAD; ISSN: 0022-152X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The chemical shifts of the N-methyl protons of a number of N-methylated-1,2,4-triazoles were studied. Substitution of methyl and methylthio groups in position 3 causes upfield shifts of the N-methyl signals, while substitution of α-pyridyl, γ-pyridyl, and phenyl groups causes downfield shifts. In 3,5-disubstituted 1,2,4-triazoles, substituents in positions 3 and 5 have additive effects on the chemical shifts of N-methyl groups, so that the chemical shifts of the N-methyl groups of such compds. can be calculated In this way, it was possible to assign the peaks of mixts. of N-monomethylated derivs. obtained by methylation of 1,2,4-triazoles.
IT 4329-78-6 36770-50-0
RL: PRP (Properties)
(NMR of)
RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



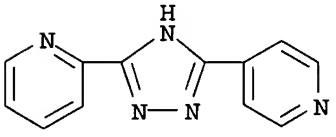
RN 36770-50-0 CAPLUS
CN Pyridine, 2-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



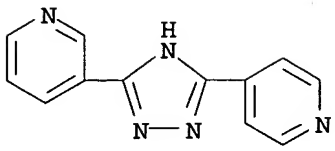
L4 ANSWER 39 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1975:588199 CAPLUS
DOCUMENT NUMBER: 83:188199
TITLE: 4-Trifluoromethylimidazoles and 5-(4-pyridyl)-1,2,4-triazoles, new classes of xanthine oxidase inhibitors
AUTHOR(S): Baldwin, J. J.; Kasinger, P. A.; Novello, F. C.; Sprague, J. M.; Duggan, D. E.
CORPORATE SOURCE: Merck Sharp and Dohme Res. Lab., West Point, PA, USA
SOURCE: Journal of Medicinal Chemistry (1975), 18(9), 895-900
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB Of about 20 title imidazoles (I; R = aryl, heterocyclic, alkyl), prepared from the condensation of an aldehyde with trifluoroglyoxal in the presence of NH3, and about 16 triazoles (II), prepared by several methods, the compds. with a free imino group had xanthine oxidase [9002-17-9] inhibitory activity. 3,5-Di-4-pyridyl-1,2,4-triazole (II, R = 4-pyridyl)(III) [4329-78-6] was among the most active with an inhibition value (I50) of 6 + 10-8M, but the corresponding 1-methyl derivative of III [56932-27-5] was inactive.
IT 4329-78-6P 36770-50-0P 36770-51-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and xanthine oxidase inhibition by)
RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



RN 36770-50-0 CAPLUS
CN Pyridine, 2-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



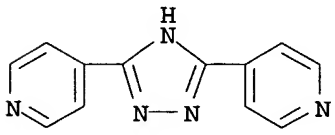
RN 36770-51-1 CAPLUS
CN Pyridine, 3-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



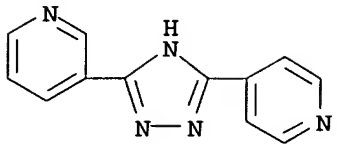
L4 ANSWER 40 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1975:564184 CAPLUS
DOCUMENT NUMBER: 83:164184
TITLE: 3,5-Dipyridyl-1,2,4-triazoles
INVENTOR(S): Baldwin, John J.; Novello, Frederick C.
PATENT ASSIGNEE(S): Merck and Co., Inc.
SOURCE: Ger. Offen., 10 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2424404	A1	19741212	DE 1974-2424404	19740520
US 3882134	A	19750506	US 1973-361914	19730521
NL 7406067	A	19741125	NL 1974-6067	19740506
SE 410458	B	19791015	SE 1974-6196	19740509
GB 1428626	A	19760317	GB 1974-21830	19740516
FR 2230357	A1	19741220	FR 1974-17249	19740517
CH 599195	A5	19780512	CH 1974-6838	19740517
JP 50025569	A	19750318	JP 1974-59269	19740521

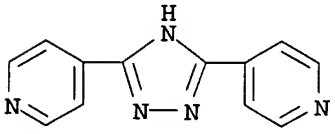
PRIORITY APPLN. INFO.: US 1973-361914 A 19730521
GI For diagram(s), see printed CA Issue.
AB Seventeen triazoles I [R = e.g. CH2CH2CN, CH2CH2OH, (CH2)3OH, CH2CH2Ph, CH2C6H4SO2NPr2-4, CH2C6H4Cl-3 or -4, 3- or 4-pyridylmethyl, morpholinoethyl, or piperidinoethyl; R1 = 3- or 4-pyridyl], useful as bronchodilators (no data), were prepared by reaction of I (R = H) with ClR, BrR, or CH2:CHCN. Thus, I (R = H, R1 = 4-pyridyl) (II) and CH2:CHCN were refluxed in pyridine containing PhCH2N+Me3 OH- to give I (R = CH2CH2CN, R1 = 4-pyridyl). Successive treatment of II with NaH in THF and with PhCH2Cl in DMF at reflux gave I (R = CH2Ph, R1 = 4-pyridyl).
IT 4329-78-6 36770-51-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with organic halides)
RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME).



RN 36770-51-1 CAPLUS
CN Pyridine, 3-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)

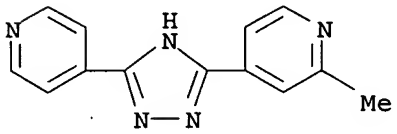


L4 ANSWER 41 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1975:558007 CAPLUS
DOCUMENT NUMBER: 83:158007
TITLE: 3,5-Disubstituted 1,2,4-triazoles, a new class of xanthine oxidase inhibitor
AUTHOR(S): Duggan, D. E.; Noll, R. M.; Baer, J. E.; Novello, F. C.; Baldwin, J. J.
CORPORATE SOURCE: Merck Inst. Therm. Res., West. Point, PA, USA
SOURCE: Journal of Medicinal Chemistry (1975), 18(9), 900-5
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB 3,5-Bis(4-pyridyl)-1,2,4-triazole (I), 3-(4-pyrimidinyl)-5-(4-pyridyl)-1,2,4-triazole (II), and 3-(4-pyridazinyl)-5-(4-pyridyl)-1,2,4-triazole (III) are active competitive inhibitors of xanthine oxidase, with inhibition consts. <1 + 10-7M. ED50 values in squirrel monkeys, derived from first-order rate consts. for the first and rate-limiting step of the xanthine-uric acid-allantoin sequence, ranged from 0.04-0.08 mg/kg, orally. Sensitivity of rats, dogs, and anthrapoid species to I, II, and III is at least an order of magnitude greater than to purine analogs tested.
IT 4329-78-6
RL: BIOL (Biological study)
(xanthine oxidase inhibition by)
RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)

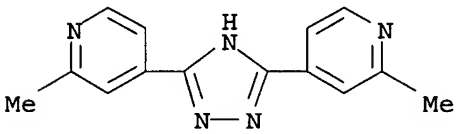


L4 ANSWER 42 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1972:552130 CAPLUS
DOCUMENT NUMBER: 77:152130
TITLE: Symmetrically and unsymmetrically 3,6-disubstituted 1,2-dihydro-1,2,4,5-tetrazines including their conversion into the corresponding tetrazines and 3,5-disubstituted 4-amino-1,2,4-triazoles
AUTHOR(S): Bowie, R. A.; Gardner, M. D.; Neilson, D. G.; Watson, K. M.; Mahmood, S.; Ridd, V.
CORPORATE SOURCE: Pharm. Div., Imp. Chem. Ind. Ltd., Macclesfield, UK
SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1972), (19), 2395-9
CODEN: JCPRB4; ISSN: 0300-922X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 3,6-Disubstituted 1,2-dihydro-1,2,4,5-tetrazines were prepared by the action

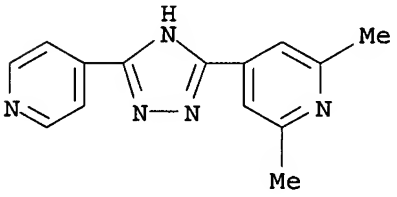
IT 36770-45-3P 36770-46-4P 36770-47-5P
36770-48-6P 36770-50-0P 36770-51-1P
36770-53-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 36770-45-3 CAPLUS
CN Pyridine, 2-methyl-4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



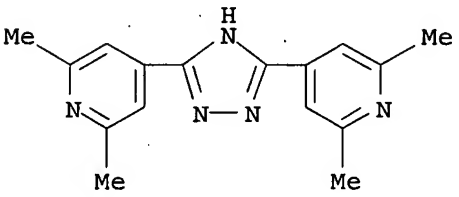
RN 36770-46-4 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis[2-methyl- (9CI) (CA INDEX NAME)



RN 36770-47-5 CAPLUS
CN Pyridine, 2,6-dimethyl-4-[5-(4-pyridinyl-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 36770-48-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis[2,6-dimethyl- (9CI) (CA INDEX NAME)



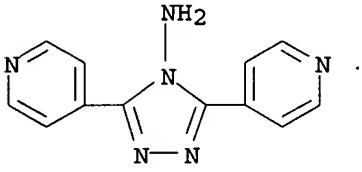
RN 36770-50-0 CAPLUS
CN Pyridine, 2-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)

of H2NNH2.H2O on nitriles in the presence of S or on amidinium chlorides; the dihydrotetrazines were oxidized to the corresponding tetrazines and rearranged by heat or acid to 3,5-disubstituted 4-amino-1,2,4-triazoles. 1,2-Dihydro-1,2,4,5-tetrazines and 4-amino-1,2,4-triazoles were distinguished by PMR spectroscopy.

IT 38634-05-8
RL: PRP (Properties)
(NMR of)

RN 38634-05-8 CAPLUS

CN 4H-1,2,4-Triazol-4-amine, 3,5-di-4-pyridinyl- (9CI) (CA INDEX NAME)



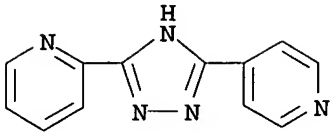
L4 ANSWER 43 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1972:405487 CAPLUS
DOCUMENT NUMBER: 77:5487
TITLE: 5-Pyridyl-1,2,4-triazoles
INVENTOR(S): Baldwin, John J.; Novello, Frederick C.
PATENT ASSIGNEE(S): Merck and Co., Inc.
SOURCE: Ger. Offen., 23 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

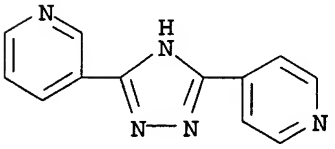
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2147882	A	19720330	DE 1971-2147882	19710924
NL 7112372	A	19720328	NL 1971-12372	19710908
AU 7133426	A	19730322	AU 1971-33426	19710914
CA 983504	A1	19760210	CA 1971-122846	19710914
GB 1352257	A	19740508	GB 1971-43755	19710920
CH 564009	A5	19750715	CH 1971-13845	19710922
FR 2107985	A5	19720512	FR 1971-34443	19710924
FR 2107985	B1	19750207		
JP 50024315	B	19750814	JP 1971-74222	19710925
BE 781056	A1	19720922	BE 1972-115407	19720322
US 4111944	A	19780905	US 1977-808575	19770621
PRIORITY APPLN. INFO.:			US 1970-75784 A	19700925
			US 1973-361915 A1	19730521
			US 1975-547848 A1	19750206
			US 1976-742945 A1	19761118

GI For diagram(s), see printed CA Issue.

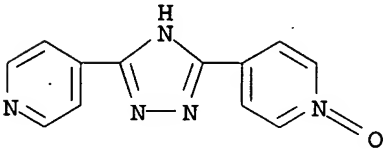
AB Fourteen title compds. (I, e.g. R = 2-methyl-4-pyridyl, 2-pyridyl, 3-pyridyl, or p-MeC6H4; R1 = H, PrCO, Me, Me2NCO, or PhSO2; R2 = 4-pyridyl, 2,6-dimethyl-4-pyridyl, 3-pyridyl, or 4-pyridyl-1-oxide) useful as drugs against hyperuricemia, gout, or hypertension were prepared by reaction of R1NHNHCOR with MeOC(:NH)R2, prepared from MeOH, Na, and R2CN, and optionally if R1 = H reaction with R1Cl (R1 = PhSO2 or Me2NCO) or (PrCO)2O. Compns. for I-containing tablets and capsules are reported. Thus, Na was added to 4-cyanopyridine and MeOH. After 30 min 2-methylisonicotinoyl hydrazide was added and the mixture refluxed 30 min and heated 15 min at 260° to give I (R = 2-methyl-4-pyridyl, R1 = H, R2 = 4-pyridyl).



RN 36770-51-1 CAPLUS
CN Pyridine, 3-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



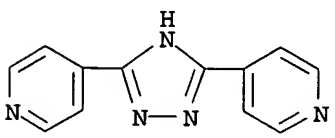
RN 36770-53-3 CAPLUS
CN Pyridine, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 1-oxide (9CI) (CA INDEX NAME)



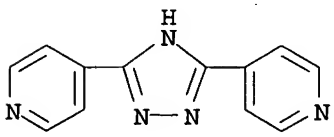
L4 ANSWER 44 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1969:114407 CAPLUS
DOCUMENT NUMBER: 70:114407
TITLE: Triazoles. X. Hydrogen bonding and infrared spectra
AUTHOR(S): Browne, E. J.; Polya, J. B.
CORPORATE SOURCE: Univ. Tasmania, Hobart, Australia
SOURCE: Journal of the Chemical Society [Section] C: Organic (1969), (7), 1056-60
CODEN: JSOOAX; ISSN: 0022-4952
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Ir spectra of N-unsubstituted 1,2,4-triazoles in the 1700-3000 cm.-1 region were studied, and classified according to the intensity and number of bands characteristic of strong intermol. H bonding. Evidence of groups showing different degrees of proton tunnelling is advanced; one of these groups appears to be involved in phosphorescent effects.

IT 4329-78-6
RL: PRP (Properties)
(hydrogen bonding in)
RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



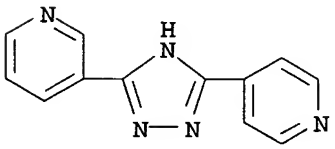
L4 ANSWER 45 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1968:114391 CAPLUS
DOCUMENT NUMBER: 68:114391
TITLE: By-products during isolation of isonicotinic acid hydrazide
AUTHOR(S): Basu, Uma P.; Dutta, Sakti P.
CORPORATE SOURCE: Bengal Immunity Res. Inst., Bengal, India
SOURCE: Industrie Chimique Belge (1967), 32(11), 1224-6
CODEN: ICBEAJ; ISSN: 0019-9052
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB Diisonicotinoyl hydrazine (I), hydrazodicarboxamide (II), and 3,5-di(4-pyridyl)-1,2,4-triazole-1-carboxhydrazide (III) were isolated as by-products in the large-scale production of isonicotinic acid hydrazide. They were separated from the reaction product by their varying solubilities in different solvents. I, m. 262-4°, and II, m. 244-6° (decomposition), were identified by their mixed m.p. III, m. 338-40° (decomposition), slowly reduces iodine, gives off pyridine on fusion with Na2CO3, is resistant to hydrolysis and to PCl5 or POCl3. Its hydrochloride forms a Cu complex. It is oxidized to the amphoteric 3,5-bis(4-pyridyl)-1,2,4-triazole (IV), m. 280-2°. IV was synthesized by treating isonicotinic acid hydrazide with N2H4 and CO2 or with isonicotinamide. A mechanism via H2NNHCO2H is suggested and confirmed by treating isonicotinic acid hydrazide containing H2NNHOH and CO2 with nicotinamide. A compound 3-(3-pyridyl)-5-(4-pyridyl)-1,2,4-triazole-1-carboxhydrazide, very similar to III, is obtained.
IT 4329-78-6P 18603-36-6P 36770-51-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



RN 18603-36-6 CAPLUS
CN Pyridine, 3,4'-s-triazole-3,5-diyldi-, nitrate (8CI) (CA INDEX NAME)

CM 1

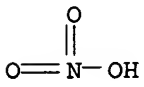
CRN 36770-51-1
CMF C12 H9 N5



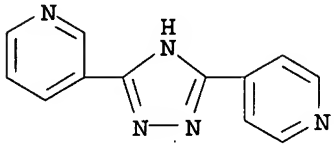
CM 2

CRN 7697-37-2

CMF H N O3

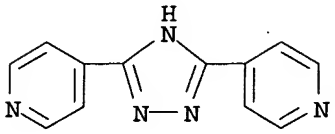


RN 36770-51-1 CAPLUS
CN Pyridine, 3-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



L4 ANSWER 46 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1966:4035 CAPLUS
DOCUMENT NUMBER: 64:4035
ORIGINAL REFERENCE NO.: 64:687g-h,688a-b
TITLE: N-Oxides and related compounds. XXVI. Ring-opening of N-methoxypyridinium perchlorate by hydroxide ion
AUTHOR(S): Eisenthal, R.; Katritzky, A. R.
CORPORATE SOURCE: Univ. East Anglia, Norwich, UK
SOURCE: Tetrahedron (1965), 21(9), 2205-13
CODEN: TETRAB; ISSN: 0040-4020
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB cf. CA 62, 1648a. Treatment of 0.55 mole pyridine N-oxide with 0.55 mole Me2SO4 and the methosulfate in 85 ml. absolute alc. treated with 55 ml. 70% HClO4 and 400 ml. EtOAc gave 88.7 g. N-methoxypyridinium perchlorate (I), m. 69-70° (95% alc.). The time dependence of spectra of 0.10N to 1.0N I in MeONa-MeOH showed no absorbance above 275 mμ and rapid change of the spectrum to that of C5H5N. The kinetics of this reaction were studied by the method of initial rates. I (0.01 mole) and 0.08 mole PhNH2.HCl in 40 ml. H2O stirred at 0° with addition of 24 g. NaOH (50% aqueous solution) and the deep red mixture made strongly acidic with 40 ml. concentrated HCl, the gummy product (1.2 g.) extracted with warm Me2CO and the filtered solution cooled gave 150 mg. carmine crystals of PhN: CHCH:CHCH2CH: NPh.2HCl salt, m. 168°. The available evidence was rationalized as a 1st irreversible step producing C5H5N and HCHO. In the accompanying 2nd step OH ions react rapidly but reversibly to give the 1,2-dihydropyridine derivative (II). Glutaconic aldehyde reacts with H2NOMe at pH 4.75 to yield III but examination of the product mixture at pH 9 reveals that further reaction proceeds rapidly from II to N-methoxypyridium ion. Accordingly at pH 4.7 the reversal of steps 2 and 3 is rapid compared with the forward reactive step 4 as shown by the observation that acidification of alkaline solns. of I results in loss of the 343 mμ absorption and regeneration of the spectrum of I.
IT 4329-78-6P, Pyridine, 4,4'-s-triazole-3,5-diyldi-
4334-22-9P, Pyridine, 4,4'-s-triazole-3,5-diyldi-, dipicrate
4334-23-0P, Pyridine, 4,4'-s-triazole-3,5-diyldi-, dihydrochloride
4334-24-1P, Pyridine, 4,4'-s-triazole-3,5-diyldi-, dinitrate
RL: PREP (Preparation)
(preparation of)

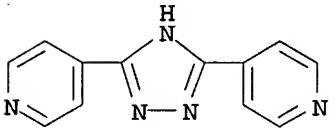
RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



RN 4334-22-9 CAPLUS
CN Pyridine, 4,4'-s-triazole-3,5-diyldi-, dipicrate (7CI, 8CI) (CA INDEX NAME)

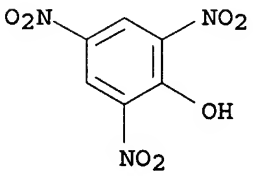
CM 1

CRN 4329-78-6
CMF C12 H9 N5

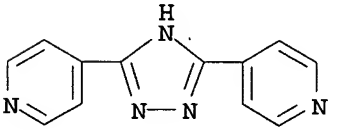


CM 2

CRN 88-89-1
CMF C6 H3 N3 O7



RN 4334-23-0 CAPLUS
CN Pyridine, 4,4'-s-triazole-3,5-diyldi-, dihydrochloride (8CI) (CA INDEX NAME)

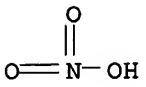


●2 HCl

RN 4334-24-1 CAPLUS
CN Pyridine, 4,4'-s-triazole-3,5-diyldi-, dinitrate (8CI) (CA INDEX NAME)

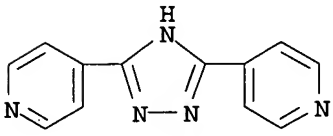
CM 1

CRN 7697-37-2
CMF H N O3

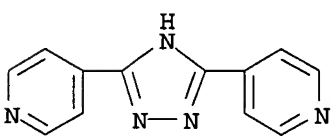


CM 2

CRN 4329-78-6
CMF C12 H9 N5



L4 ANSWER 47 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1966:4034 CAPLUS
DOCUMENT NUMBER: 64:4034
ORIGINAL REFERENCE NO.: 64:687e-g
TITLE: Abnormal products during isolation of isonicotinic acid hydrazide
AUTHOR(S): Basu, Uma Prasanna; Dutta, Saktipada
CORPORATE SOURCE: Bengal Immunity Res. Inst., Calcutta
SOURCE: Journal of Organic Chemistry (1964), 30(10), 3562-4
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB Et isonicotinate and N2H4.H2O not only afforded isonicotinic acid hydrazide but also symm. diisonicotinyl hydrazine (I), hydrazodicarbonamide (II), and 3,5-di(4-pyridyl)-1,2,4-triazole-1-carboxhydrazide (III) in small amts. I, II, and III were separated and purified. Their structures were further confirmed by chemical reactions. Oxidation of III gave 3,5-di(4-pyridyl)-1,2,4-triazole. The mechanism of the reaction was discussed.
IT 4329-78-6P, Pyridine, 4,4'-s-triazole-3,5-diyldi-
4334-22-9P, Pyridine, 4,4'-s-triazole-3,5-diyldi-, dipicrate
4334-23-0P, Pyridine, 4,4'-s-triazole-3,5-diyldi-, dihydrochloride
4334-24-1P, Pyridine, 4,4'-s-triazole-3,5-diyldi-, dinitrate
RL: PREP (Preparation)
(preparation of)
RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)

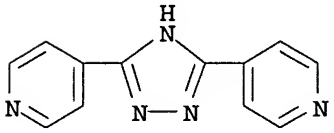


RN 4334-22-9 CAPLUS

CN Pyridine, 4,4'-s-triazole-3,5-diyldi-, dipicrate (7CI, 8CI) (CA INDEX NAME)

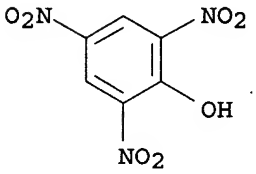
CM 1

CRN 4329-78-6
CMF C12 H9 N5

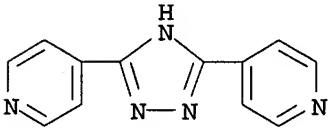


CM 2

CRN 88-89-1
CMF C6 H3 N3 O7



RN 4334-23-0 CAPLUS
CN Pyridine, 4,4'-s-triazole-3,5-diyldi-, dihydrochloride (8CI) (CA INDEX NAME)

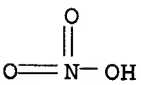


●2 HCl

RN 4334-24-1 CAPLUS
CN Pyridine, 4,4'-s-triazole-3,5-diyldi-, dinitrate (8CI) (CA INDEX NAME)

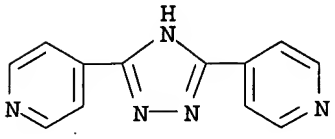
CM 1

CRN 7697-37-2
CMF H N O3

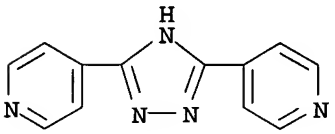


CM 2

CRN 4329-78-6
CMF C12 H9 N5



L4 ANSWER 48 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1963:14876 CAPLUS
DOCUMENT NUMBER: 58:14876
ORIGINAL REFERENCE NO.: 58:2449a
TITLE: Synthesis of 3,5-diaryl-1,2,4-triazole
AUTHOR(S): Kubota, Seiju; Ohtsuka, Michiko
CORPORATE SOURCE: Univ. Tokushima
SOURCE: Tokushima Daigaku Yakugakubu Kenkyu Nenpo (1960), 9, 15-18
CODEN: TDYKA8; ISSN: 0371-6139
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB RCONHNHCOR' and NH4Cl (2 equivs.) heated 3 hrs. at 260-70° gave the corresponding 3,5-(R, R' substituted)-1,2,4-triazole (R, R', and % yield given): Ph, Ph, 68; PhCH2, PhCH2, 11; Ph, 4-MeC6H4, 10; 4-pyridyl, 4-pyridyl, 45; Ph, 4-pyridyl, 33; Ph, 2-pyridyl, 5; 2-pyridyl, 2-pyridyl, 5. The use of urea or benzenesulfonamide instead of NH4Cl decreased the yield.
IT 4329-78-6P, Pyridine, 4,4'-s-triazole-3,5-diyldi-
RL: PREP (Preparation)
(preparation of)
RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



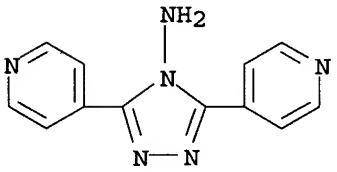
L4 ANSWER 49 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1960:129096 CAPLUS
DOCUMENT NUMBER: 54:129096
ORIGINAL REFERENCE NO.: 54:24790h-i,24791a-d
TITLE: Preparation of 1,2,4,5-tetrazines from pyridine and methylenedioxybenzene
AUTHOR(S): Dallacker, F.
CORPORATE SOURCE: Tech. Hochschule, Aachen, Germany
SOURCE: Monatshefte fuer Chemie (1960), 91, 294-304
CODEN: MOCMB7; ISSN: 0026-9247
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Pyridine-2-carbonitrile, the 3- and 4-isomer, and 3,4-methylenedioxybenzonitrile were treated with N2H4.H2O (I) to give the corresponding 1,2-dihydro-1,2,4,5-tetrazine (II), which was oxidized with HNO3 to the 1,2,4,5-tetrazine (III), or the pyridine compds. were rearranged with HCl to a 3,5-disubstituted-4-amino-1,2,4-triazole (IV). A

mixture of 46.8 g. pyridinecarbonitrile and 200 ml. of 80% I was heated on a steam-bath and a small amount of Raney Ni added. Heating was continued until a solid formed, and after 10 min., 500 ml. ice water was added and 3,6-dipyridyl derivative of II separated and some IV remained in the filtrate. Thus prepared were II (pyridine isomer, m.p., crystallization solvent, % yield, and color given): 2, 194.2°, iso-PrOH, 85.5, yellow; 3, 235.2°, pyridine, 46.2, orange; 4, 275.5°, HOAc-H2O, 72.4, orange. Similarly, 49 g. 3,4-methylenedioxybenzonitrile, 150 ml. 80% I, and 23 g. H2NNH2.HCl gave 3,6-bis(3,4-methylenedioxyphenyl) derivative of II, m. 242.5° (HOAc), 51.8% yield, yellow. A solution of 2 g. 3,6-disubstituted derivative of II in 100 ml. HOAc was treated during 10 min. with 10 ml. 5N HNO3 and with cooling or by adding 1 ml. HNO3 gave the salt of III which was crystallized from pyridine (V) to give the base. Thus prepared were III (3,6-substitution, m.p., crystallization solvent, % yield, and color given): 2-pyridyl, 224.5°, iso-PrOH, 81.5, red; 3-pyridyl, 198.2°, EtOH, 80.4, blue-red; 4-pyridyl, 256.8°, HCONMe2, 89.4, violet; 3,4-methylenedioxyphenyl, 270.5°, HCONMe2, 98.5, red; 2-thienyl, 226.5°, EtOH, 40.2, red. A mixture of 10 g. 3,6-dipyridyl derivative of II and 200 ml. N HCl was heated 12-15 min. and the clear solution made alkaline with N NH3 to give a crude product. This was heated for 5-6 hrs. with 50 g. Raney Ni in 3 l. iso-PrOH, filtered hot, and IV crystallized from the filtrate. Thus prepared were the following IV (3,5-substitution, m.p. crystallization solvent, and % yield given): 2-pyridyl, 184.8°, iso-PrOH, 45.2; 3-pyridyl, 275.5°, iso-PrOH, 63.2; 4-pyridyl, 328.6° (decomposition), H2O, 58.4. To a solution of 8 g. 3,6-bis(3,4-methylenedioxyphenyl) derivative of II in 300 ml. boiling HOAc was added 100 ml. N HCl. After heating the mass 10 min., it was concentrated in vacuo and 3,5-bis(3,4-methylenedioxyphenyl)-1,2,4-oxadiazole separated, m. 242.8° (HCONMe2), in 15% yield. Concentration of the filtrate gave 1,2-bis(3,4-methylenedioxybenzoyl)hydrazine, m. 234.5° (HOAc-H2O), in 24% yield. Infrared data supported the structures given.

IT 38634-05-8P, 4H-1,2,4-Triazole, 4-amino-3,5-di-4-pyridyl-
RL: PREP (Preparation)
(preparation of)

RN 38634-05-8 CAPLUS

CN 4H-1,2,4-Triazol-4-amine, 3,5-di-4-pyridinyl- (9CI) (CA INDEX NAME)



L4 ANSWER 50 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1959:106842 CAPLUS

DOCUMENT NUMBER: 53:106842

ORIGINAL REFERENCE NO.: 53:19169c-d

TITLE: Search for tuberculostatics. VI. Some new derivatives of isonicotinic acid hydrazide

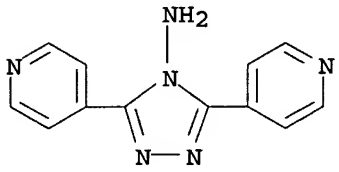
AUTHOR(S): Zsolnai, Tibor

CORPORATE SOURCE: Univ. Debrecen, Hung.

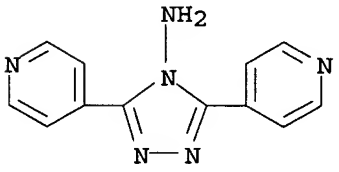
SOURCE: Zentralblatt fuer Bakteriologie, Parasitenkunde, Infektionskrankheiten und Hygiene, Abteilung 1: Medizinisch-Hygienische Bakteriologie, Virusforschung und Parasitologie, Originale (1959), 175, 269-81
CODEN: ZBPHA6; ISSN: 0372-8110

DOCUMENT TYPE: Journal

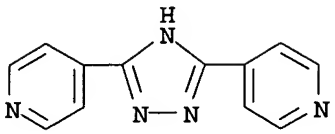
LANGUAGE: German
GI For diagram(s), see printed CA Issue.
AB cf. C.A. 53, 17336c. Some derivs. of isonicotinic acid hydrazide were tested and their tuberculostatic activity tested in vitro. Only those compds. which contained the C:C.N:C.C:CCONHN group were tuberculostatic. 34 references.
IT 38634-05-8, Pyridine, 4,4'-(4-amino-4H-1,2,4-triazole-3,5-diyl)di- (tuberculostatic action of)
RN 38634-05-8 CAPLUS
CN 4H-1,2,4-Triazol-4-amine, 3,5-di-4-pyridinyl- (9CI) (CA INDEX NAME)



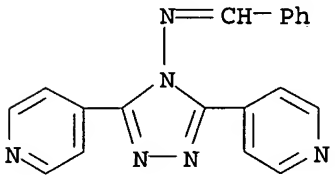
L4 ANSWER 51 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1958:113705 CAPLUS
DOCUMENT NUMBER: 52:113705
ORIGINAL REFERENCE NO.: 52:20151g-h
TITLE: The product from condensation of isonicotinic acid with hydrazine hydrate
AUTHOR(S): Yashunskii, V. G.; Pavlov, L. N.; Ermolaeva, V. G.; Schukina, M. N.
SOURCE: Meditsinskaya Promyshlennost SSSR (1957), 11(No. 12), 38-40
CODEN: MPSSA9; ISSN: 0369-1586
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB The by-product formed during condensation of isonicotinic acid and hydrazine hydrate was identified tentatively as 2,5-di(4-pyridyl)-1-amino-1,3,4-triazole. The aminotriazole cycle possesses great stability and the amino group can be split off. However, it cannot form salts. It melts at 330-33° with decomposition Picric acid and HCl yield dipicrate and dihydrochloride. Heating with KMnO4 or HNO3 yields 2,5-di(4-pyridyl)-1,3,4-triazole. Heating with benzaldehyde yields a compound having the formula C19H14N6.H2O.
IT 38634-05-8, Pyridine, 4,4'-(4-amino-4H-1,2,4-triazole-3,5-diyl)di- (and derivs.)
RN 38634-05-8 CAPLUS
CN 4H-1,2,4-Triazol-4-amine, 3,5-di-4-pyridinyl- (9CI) (CA INDEX NAME)



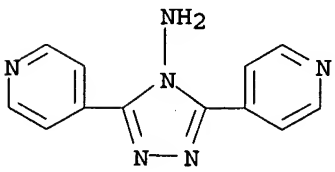
IT 4329-78-6P, Pyridine, 4,4'-s-triazole-3,5-diyldi-
111274-04-5P, Pyridine, 4,4'-(4-benzylideneamino-4H-1,2,4-triazole-3,5-diyl)di-
RL: PREP (Preparation)
(preparation of)
RN 4329-78-6 CAPLUS
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



RN 111274-04-5 CAPLUS
CN Pyridine, 4,4'-(4-benzylideneamino-4H-1,2,4-triazole-3,5-diyl)di- (6CI) (CA INDEX NAME)

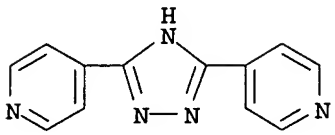


L4 ANSWER 52 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1958:35257 CAPLUS
DOCUMENT NUMBER: 52:35257
ORIGINAL REFERENCE NO.: 52:6345f-g
TITLE: 2,5-Di(4-pyridyl)-1-amino-1,3,4-triazole and its derivatives
AUTHOR(S): Yashunskii, V. G.; Pavlov, L. N.; Ermolalva, V. G.; Shchukina, M. N.
SOURCE: Khimicheskaya Nauka i Promyshlennost (1957), 2, 658
CODEN: KHNPAX; ISSN: 0368-5586
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB In the condensation of isonicotinic acid with hydrazine hydrate besides the by-product 1,2-diisonicotinoyl a new product was found which is probably 2,5-di(4-pyridyl)-1-amino-1,3,4-triazole (I), stable in boiling HCl. K2MnO4 and concentrated HNO3 reacted with I to give 2,5-di(4-pyridyl)-1,3,4-triazole (II), m. 286-9°. Its di-HCl salt (m. 300-2°) and its dipicrate (m. 257-9°) were prepared Boiling I with PhCHO at 150-5° gave the benzaldazine derivs. of II (m. 197-200°) and of 2,4-di(4-pyridyl)triazole, m. 286-9°.
IT 38634-05-8, Pyridine, 4,4'-(4-amino-4H-1,2,4-triazole-3,5-diyl)di- (and derivs.)
RN 38634-05-8 CAPLUS
CN 4H-1,2,4-Triazol-4-amine, 3,5-di-4-pyridinyl- (9CI) (CA INDEX NAME)

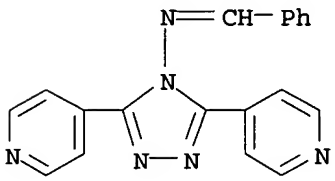


IT 4329-78-6P, Pyridine, 4,4'-s-triazole-3,5-diyldi-
111274-04-5P, Pyridine, 4,4'-(4-benzylideneamino-4H-1,2,4-triazole-3,5-diyl)di-
RL: PREP (Preparation)
(preparation of)
RN 4329-78-6 CAPLUS

CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



RN 111274-04-5 CAPLUS
CN Pyridine, 4,4'-(4-benzylideneamino-4H-1,2,4-triazole-3,5-diyl)di- (6CI) (CA INDEX NAME)



L4 ANSWER 53 OF 53 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1957:9360 CAPLUS
DOCUMENT NUMBER: 51:9360
ORIGINAL REFERENCE NO.: 51:1957e-i,1958a-e
TITLE: Congeners of pyridine-4-carboxyhydrazide. I. Derivatives of 4-cyanopyridine and 2-cyanothiazole
AUTHOR(S): Libman, D. D.; Slack, R.
CORPORATE SOURCE: May & Baker Ltd., Dagenham, UK
SOURCE: Journal of the Chemical Society (1956) 2253-7
CODEN: JCSOA9; ISSN: 0368-1769
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
OTHER SOURCE(S): CASREACT 51:9360

AB 4-Cyanopyridine (I) was converted into pyridine-4-carboxamidrazone (II), and several dipyridyl heterocyclic secondary products were isolated. 2-Cyanothiazole (III) and some derivs. were also prepared I (150 g.) in CHCl3 and EtOH treated with anhydrous HCl (IV) at 0° until a semi-solid upper layer separated, the vessel kept sealed 24 hrs. at 0°, the contents treated at 0° with 50% NaOH, the crude imidoate added to 372 ml. EtOH, 83 ml. 100% N2H4.H2O (IVa), 105 ml. H2O, and 114 ml. concentrated HCl at 5°, and the mixture kept at 0° for 2 hrs. gave 17 g. II.HCl as prisms, m. 280° (decomposition). The original filtrate heated 3 hrs. at 100° yielded 60 g. 1,2-dihydro-3,6-di(4-pyridyl)-1,2,4,5-tetrazine (V) as orange needles, m. 275°. Yields of II of 28% were obtained in smaller-scale expts., but with a corresponding lower yield of V. Crude imidoate base (from 40 g. I) treated at 0° with a neutral solution of 16.5 ml. IVa, EtOH, H2O, and 33 ml. concentrated HCl for 1 hr. gave yellow plates of the diimine, m. above 280° (decomposition). At 100° the plates were converted into 5.2 g. 1,2-di(pyridine-4-carboxyimidoyl)hydrazine as an amorphous solid of the same m.p. The original filtrate heated 3 hrs. at 100° gave 15.4 g. of V and 1 g. 3,5-di(4-pyridyl)-1,2,4-triazole (VI), m. 283° (from EtOH). VI was also prepared by dissolving the crude hydrochloride of the above diimine in hot H2O and refluxing. The bismethotoluene-p-sulfonate formed prisms, m. 188° (from MeOH-Me2CO). In the following methods crude VI was purified by dissolution in cold 2N NaOH and repptn. with 2N AcOH followed by crystallization from alc. Pyridine-4-carboxyhydrazide heated with an equimolar

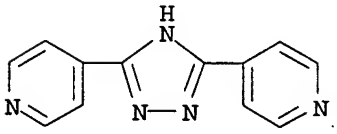
amount of pyridine-4-carboxamide at 220-40° for 1 hr., or 0.5 hr. at 140-50° with pyridine-4-thiocarboxamide (VII) gave VI in yields of 5% and 27%, resp. V (4.76 g.) refluxed 6 hrs. in EtOH-KOH gave 1.2 g. VI. II.HCl (4 g.) heated 45 min. at 130° in a sealed tube with H2O gave 0.4 g. VI and 0.2 g. V. II (18.2 g.) in 2N AcOH treated 2 hrs. at 0° with 7.5 g. NaNO2 in H2O yielded 10.5 g. 5-(4-pyridyl)-1,2,3,4-tetrazole, prisms, m. 262-3° (decomposition). V (32 g.) in hot 50% AcOH poured into 6.5 l. cold solvent and treated below 15° with 9.4 g. NaNO2 in a little H2O gave 21 g. 3,6-di(4-pyridyl)-1,2,4,5-tetrazine (VIII), m. 258° (decomposition); bismetho(methyl sulfate) (95% yield), m. 200° (decomposition). VIII refluxed 5 min. with 2N Na2CO3 gave 56% RCH:NNHCOR(R = 4-pyridyl) (IX), needles, m. 230° (from H2O). Pyridine-4-carboxyhydrazide and 4-formylpyridine refluxed 1 hr. gave IX as prisms, m. 232° (from MeNO2). V (37 g.) suspended in 370 ml. 2N HCl and refluxed 8-9 min. gave 22 g. 4-amino-3,5-di(4-pyridyl)4,1,2-triazole (X) dihydrochloride as prisms, m. 312° (from 4N HCl), converted by 2N NH3 into free X, m. 335-40° (decomposition). The filtrate yielded 15 g. 1,2-di(pyridine-4-carbonyl)hydrazine (XI) as needles, m. 250°. XI (108 g.) added portionwise below 35° to 270 ml. concentrated H2SO4, heated 10 min. at 100°, and the cooled solution neutralized with NH4OH gave 32 g. 2,5-di(4-pyridyl)-1,3,4-oxadiazole as needles, m. 185° (from H2O or MeOH); bismethiodide (57% yield), orange needles, m. 278°. VII (330 g.), 620 ml. EtOH, and 130 ml. IVa warmed at 40°, after the evolution of H2S had subsided the mixture refluxed 1 hr., and the product purified gave an acetate which dissociated at 100° to give 140 g. V. The AcOH filtrate concentrated to dryness and the residue extracted with C5H5N gave 30 g. 2,5-di(4-pyridyl)1,3,4-thiadiazole as plates, m. 243°. The residue from 2N HCl gave 35 g. X dihydrochloride. The original aqueous extract gave a residue which when fractionally crystallized gave small amts. of plates, m. 227°, and needles, m. 285° (from aqueous alc.). I (5 g.) in 25 ml. PhCH2SH saturated in the cold with IV and kept at room temperature for 5 days and the crude thioester hydrochloride added portionwise to 5 ml. IVa in EtOH, and the solution made neutral, left 1 week, and the precipitated solid collected gave

1.5 g. V, a little of VIII, and (PHCH2)2S, m. 69-70°. Basification of the filtrate gave 1.2 g. X. An intimate mixture of 64 g. thiazole-2-carboxamide mixed with 10 ml. 100% IVa at 0° yielded 8 g. thiazole-2-carboxamidrazone as needles, m. 106° (from ligroine). IVa (20 ml.) and 20 g. III first cooled and then heated 3 hrs. yielded 7 g. 1,2(or 1,4)-dihydro-3,6-di(2-thiazolyl)-1,2,4,5-tetrazine, orange needles, m. 209° (decomposition) (from aqueous C5H5N). III (30 g.) in EtOH treated with 240 ml. saturated EtOH-NH3, then saturated at 0° with H2S, left 2 hrs. and purified gave 24 g. thiazole-2-thiocarboxamide as plates, m. 176° (from H2O).

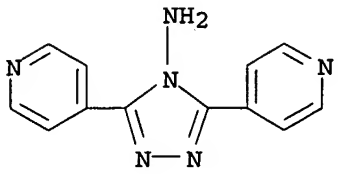
IT 4329-78-6P, Pyridine, 4,4'-s-triazole-3,5-diyldi-
38634-05-8P, Pyridine, 4,4'-(4-amino-4H-1,2,4-triazole-3,5-diyl)di-
108564-98-3P, Pyridine, 4,4'-(4-amino-4H-1,2,4-triazole-3,5-diyl)di-, dihydrochloride 124359-89-3P, Pyridine, 4,4'-s-triazole-3,5-diyldi-, dimetho-p-toluenesulfonate
RL: PREP (Preparation)
(preparation of)

RN 4329-78-6 CAPLUS

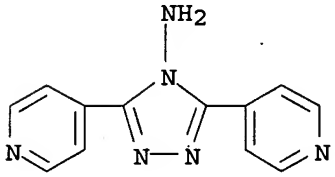
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



RN 38634-05-8 CAPLUS
CN 4H-1,2,4-Triazol-4-amine, 3,5-di-4-pyridinyl- (9CI) (CA INDEX NAME)



RN 108564-98-3 CAPLUS
CN Pyridine, 4,4'-(4-amino-4H-1,2,4-triazole-3,5-diyl)di-, dihydrochloride (6CI) (CA INDEX NAME)

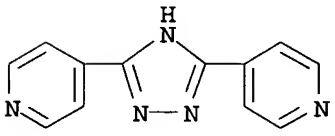


●2 HCl

RN 124359-89-3 CAPLUS
CN Pyridine, 4,4'-s-triazole-3,5-diyldi-, dimetho-p-toluenesulfonate (6CI) (CA INDEX NAME)

CM 1

CRN 4329-78-6
CMF C12 H9 N5



CM 2

CRN 80-48-8
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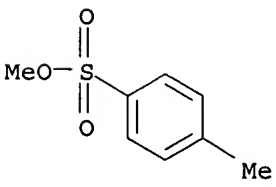

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CA INDEXING COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

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CA INDEXING COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

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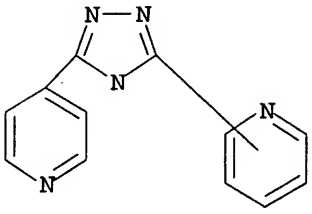

Structure attributes must be viewed using STN Express query preparation.
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L5 13 SEA L3

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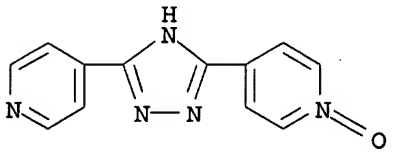
L5 ANSWER 1 OF 13 USPATFULL on STN
ACCESSION NUMBER: 2006:222524 USPATFULL
TITLE: Process for producing 1,2,4-triazole compound and intermediate therefor
INVENTOR(S): Nakamura, Hiroshi, Saitama-shi, JAPAN
Uda, Junichiro, Saitama-shi, JAPAN
Ohno, Atsushi, Saitama-shi, JAPAN
Sato, Takahiro, Saitama-shi, JAPAN
PATENT ASSIGNEE(S): FUJIYAKUHIN CO., LTD., Saitama, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2006189811	A1	20060824	
APPLICATION INFO.:	US 2004-565678	A1	20040723	(10)
	WO 2004-JP10456		20040723	
			20060124	PCT 371 date

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C., 1940 DUKE STREET, ALEXANDRIA, VA, 22314, US
NUMBER OF CLAIMS: 10
EXEMPLARY CLAIM: 1
LINE COUNT: 1031
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Provided is a process for producing 1,2,4-triazole compound (5), or a salt or hydrate thereof which comprises reacting compound (1) with Rc-X (2) to give compound (3), reacting compound (3) with a nitrilization agent to give compound (4), and then removing the group Rc, as shown by the reaction scheme: ##STR1## (Wherein Ra, Rb and Rd represent a group, Rc represents a group which can be removed by an acid) A 1,2,4-triazole compound (5) having an optionally substituted 2-cyanopyridin-4-yl group at 3-position and an optionally substituted aromatic group at 5-position which inhibits a xanthine oxidase and is

useful for treatment of gout and hyperuricemia can be obtained from compound (1) in a high yield without requiring isolation of reaction products in the course of reactions.

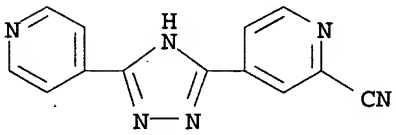
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 36770-53-3P 837371-71-8P 837371-86-5P
837371-87-6P 837371-88-7P
(intermediate; preparation of 1,2,4-triazole derivs.)
RN 36770-53-3 USPATFULL
CN Pyridine, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 1-oxide (9CI) (CA INDEX NAME)



RN 837371-71-8 USPATFULL
CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 4-methylbenzenesulfonate (9CI) (CA INDEX NAME)

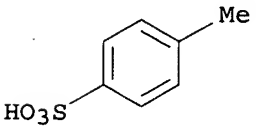
CM 1

CRN 577778-58-6
CMF C13 H8 N6

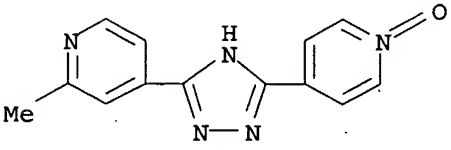


CM 2

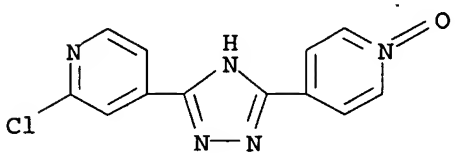
CRN 104-15-4
CMF C7 H8 O3 S



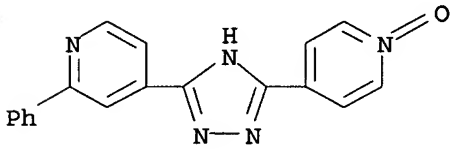
RN 837371-86-5 USPATFULL
CN Pyridine, 2-methyl-4-[5-(1-oxido-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



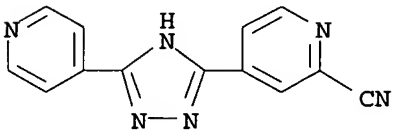
RN 837371-87-6 USPATFULL
CN Pyridine, 2-chloro-4-[5-(1-oxido-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



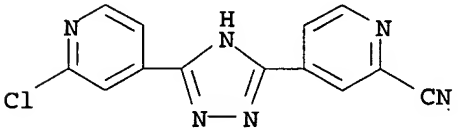
RN 837371-88-7 USPATFULL
CN Pyridine, 4-[5-(1-oxido-4-pyridinyl)-1H-1,2,4-triazol-3-yl]-2-phenyl- (9CI) (CA INDEX NAME)



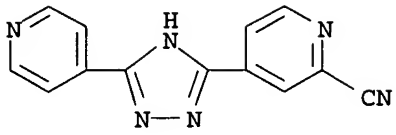
IT 577778-58-6P 577778-84-8P 837371-75-2P
837371-76-3P 837371-77-4P 837371-81-0P
837371-85-4P
(preparation of 1,2,4-triazole derivs.)
RN 577778-58-6 USPATFULL
CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 577778-84-8 USPATFULL
CN 2-Pyridinecarbonitrile, 4-[5-(2-chloro-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 837371-75-2 USPATFULL
CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, hydrochloride (9CI) (CA INDEX NAME)

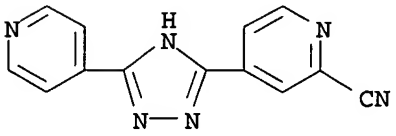


●x HCl

RN 837371-76-3 USPATFULL
CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, sulfate (9CI) (CA INDEX NAME)

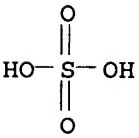
CM 1

CRN 577778-58-6
CMF C13 H8 N6



CM 2

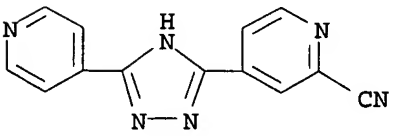
CRN 7664-93-9
CMF H2 O4 S



RN 837371-77-4 USPATFULL
CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, methanesulfonate (9CI) (CA INDEX NAME)

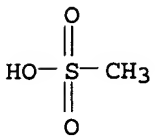
CM 1

CRN 577778-58-6
CMF C13 H8 N6



CM 2

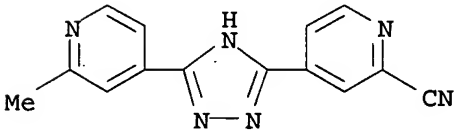
CRN 75-75-2
CMF C H4 O3 S



RN 837371-81-0 USPATFULL
CN 2-Pyridinecarbonitrile, 4-[5-(2-methyl-4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 4-methylbenzenesulfonate (9CI) (CA INDEX NAME)

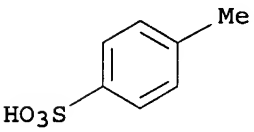
CM 1

CRN 577778-70-2
CMF C14 H10 N6



CM 2

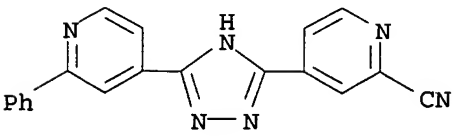
CRN 104-15-4
CMF C7 H8 O3 S



RN 837371-85-4 USPATFULL
CN 2-Pyridinecarbonitrile, 4-[5-(2-phenyl-4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 4-methylbenzenesulfonate (9CI) (CA INDEX NAME)

CM 1

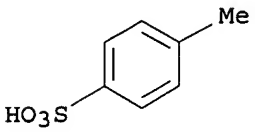
CRN 577778-85-9
CMF C19 H12 N6



CM 2

CRN 104-15-4

CMF C7 H8 O3 S



L5 ANSWER 2 OF 13 USPATFULL on STN

ACCESSION NUMBER:	2005:5069 USPATFULL		
TITLE:	Novel 1 2 4-triazole compound		
INVENTOR(S):	Nakamura, Hiroshi, Nagareyama-shi, JAPAN Kaneda, Soichi, Shiki-shi, JAPAN Sato, Takahiro, Kita-ku, JAPAN Ashizawa, Naoki, Kamifukuoka-shi, JAPAN Matsumoto, Koji, Saitama-shi, JAPAN Iwanaga, Takashi, Kazo-shi, JAPAN Inoue, Tsutomu, Funabashi-shi, JAPAN		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005004175	A1	20050106
	US 7074816	B2	20060711
APPLICATION INFO.:	US 2004-495322	A1	20040511 (10)
	WO 2002-JP12662		20021203
	NUMBER	DATE	
PRIORITY INFORMATION:	JP 2002-17825	20020128	
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	PRICE HENEVELD COOPER DEWITT & LITTON, LLP, 695 KENMOOR, S.E., P O BOX 2567, GRAND RAPIDS, MI, 49501		
NUMBER OF CLAIMS:	9		
EXEMPLARY CLAIM:	1		
LINE COUNT:	787		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel 1,2,4-triazole compound which is useful as a therapeutic agent for hyperuricemia and gout due to hyperuricemia is provided. A compound is represented by the following general formula (1): ##STR1##

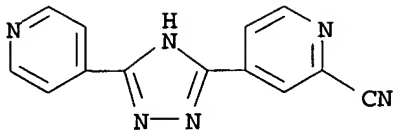
wherein R.sub.2 represents an unsubstituted or substituted pyridyl group, R.sub.1 represents a similar pyridyl group, a pyridine-N-oxide group corresponding to these pyridyl groups, or a phenyl group, and R.sub.3 represents hydrogen or a lower alkyl group substituted with pivaloyloxy group and R.sub.3 bonds to a nitrogen atom in the ring. A process for production of a compound by reacting a nitrile and a hydrazide, and a therapeutic agent, particularly a xanthine oxidase inhibitor are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

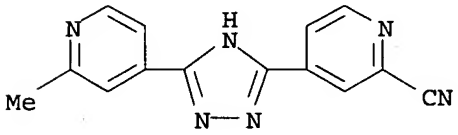
IT 577778-58-6P 577778-70-2P 577778-74-6P
577778-82-6P 577778-84-8P 577778-85-9P
(preparation of 1,2,4-triazole derivs. for treatment of hyperuricemia)

RN 577778-58-6 USPATFULL

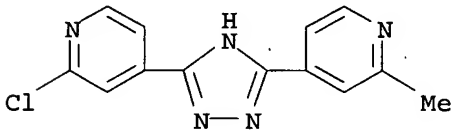
CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



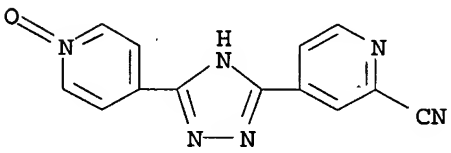
RN 577778-70-2 USPATFULL
CN 2-Pyridinecarbonitrile, 4-[5-(2-methyl-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



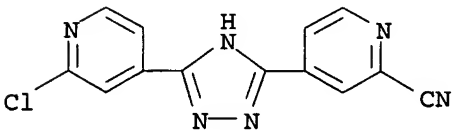
RN 577778-74-6 USPATFULL
CN Pyridine, 2-chloro-4-[5-(2-methyl-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



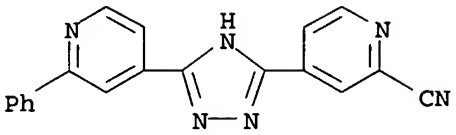
RN 577778-82-6 USPATFULL
CN 2-Pyridinecarbonitrile, 4-[5-(1-oxido-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 577778-84-8 USPATFULL
CN 2-Pyridinecarbonitrile, 4-[5-(2-chloro-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



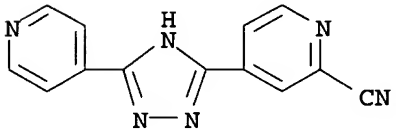
RN 577778-85-9 USPATFULL
CN 2-Pyridinecarbonitrile, 4-[5-(2-phenyl-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



IT 577778-88-2P
(preparation of 1,2,4-triazole derivs. for treatment of hyperuricemia)
RN 577778-88-2 USPATFULL
CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

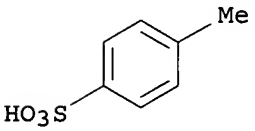
CM 1

CRN 577778-58-6
CMF C13 H8 N6



CM 2

CRN 104-15-4
CMF C7 H8 O3 S



L5 ANSWER 3 OF 13 USPATFULL on STN
ACCESSION NUMBER: 2002:160747 USPATFULL
TITLE: 3-(substituted pyridyl)-1,2,4-triazole compounds
INVENTOR(S): Tisdell, Francis E., Carmel, IN, United States
Johnson, Peter L., Indianapolis, IN, United States
Pechacek, James T., Indianapolis, IN, United States
Bis, Scott J., Carmel, IN, United States
Hegde, Vidyadhar B., Carmel, IN, United States
Schoonover, Jr., Joe R., Brownsburg, IN, United States
Dintenfass, Leonard P., Indianapolis, IN, United States
Gifford, James M., Lebanon, IN, United States
DeVries, Donald H., Fishers, IN, United States
Martin, Timothy P., Indianapolis, IN, United States
Ripa, Perry V., Sun Prairie, WI, United States
PATENT ASSIGNEE(S): Dow AgroSciences LLC, Indianapolis, IN, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6413992	B1	20020702	
APPLICATION INFO.:	US 1999-425091		19991022	(9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-105356P	19981023 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Morris, Patricia L.	
LEGAL REPRESENTATIVE:	Stuart, Donald R., Mixan, Craig E.	
NUMBER OF CLAIMS:	9	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	0 Drawing Figure(s); 0 Drawing Page(s)	
LINE COUNT:	1129	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compounds of the formula ##STR1##

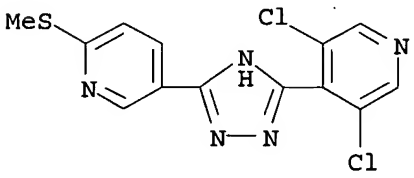
wherein one of X and Y is lower alkyl, haloalkyl, lower alkenyl, lower alkynyl, or alkoxyalkyl; and the other of X and Y is optionally substituted phenyl, pyridyl, thienyl, cyclopropyl, or thiazolyl; and Z is subtituted pyridyl are useful as insecticides and acaricides. New synthetic procedures and intermediates for preparing the compounds, pesticide compositions containing the compounds, and methods of controlling insects and mites using the compounds are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 265985-45-3P
(preparation of pyridyl-1,2,4-triazoles as acaricides and insecticides)

RN 265985-45-3 USPATFULL

CN Pyridine, 3,5-dichloro-4-[5-[6-(methylthio)-3-pyridinyl]-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)

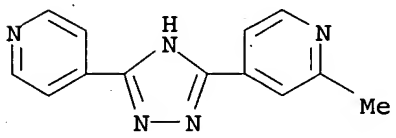


L5 ANSWER 4 OF 13 USPATFULL on STN

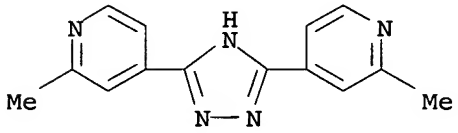
ACCESSION NUMBER:	78:49009 USPATFULL		
TITLE:	Anti-hyperuricemia composition		
INVENTOR(S):	Novello, Frederick C., Berwyn, PA, United States Baldwin, John J., Lansdale, PA, United States		
PATENT ASSIGNEE(S):	Merck & Co., Inc., Rahway, NJ, United States (U.S. corporation)		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4111944		19780905
APPLICATION INFO.:	US 1977-808575		19770621 (5)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1976-742945, filed on 18 Nov 1976, now abandoned which is a continuation of Ser. No. US 1975-547848, filed on 6 Feb 1975, now abandoned which is a continuation of Ser. No. US 1973-361915, filed on 21 May 1973, now patented, Pat. No. US 3892762 which is a continuation-in-part of Ser. No. US 1970-75784, filed on 25 Sep 1970, now abandoned		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Randolph, John D.		
LEGAL REPRESENTATIVE:	Sudol, Jr., Michael C., Szura, Daniel T.		

NUMBER OF CLAIMS: 3
EXEMPLARY CLAIM: 1
LINE COUNT: 494
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compositions useful in the treatment of gout and hyperuricemia and containing a substituted 1,2,4-triazole as the active ingredient are provided, the triazoles being substituted at the 5 position with a pyridyl radical and at the 3 position with a phenyl or a pyridyl radical. Methods of preparing these substituted triazoles are described. Certain of the compounds are novel.

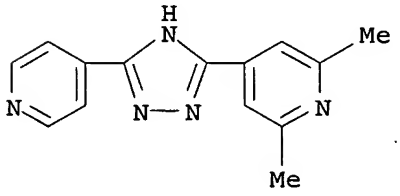
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 36770-45-3P 36770-46-4P 36770-47-5P
36770-48-6P 36770-50-0P 36770-51-1P
36770-53-3P
(preparation of)
RN 36770-45-3 USPATFULL
CN Pyridine, 2-methyl-4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



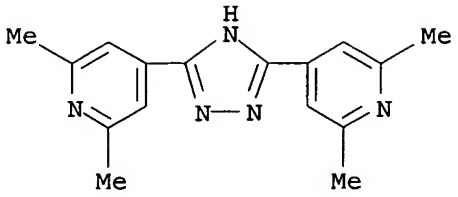
RN 36770-46-4 USPATFULL
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis[2-methyl- (9CI) (CA INDEX NAME)



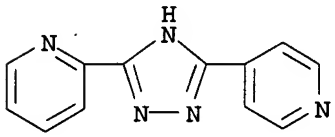
RN 36770-47-5 USPATFULL
CN Pyridine, 2,6-dimethyl-4-[5-(4-pyridinyl-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



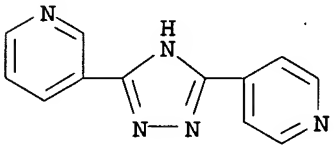
RN 36770-48-6 USPATFULL
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis[2,6-dimethyl- (9CI) (CA INDEX NAME)



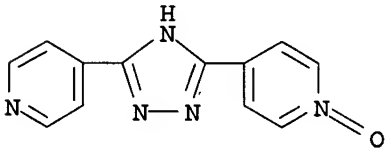
RN 36770-50-0 USPATFULL
CN Pyridine, 2-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 36770-51-1 USPATFULL
CN Pyridine, 3-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 36770-53-3 USPATFULL
CN Pyridine, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 1-oxide (9CI) (CA INDEX NAME)



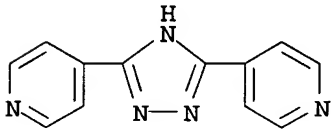
L5 ANSWER 5 OF 13 USPATFULL on STN
ACCESSION NUMBER: 77:49489 USPATFULL
TITLE: 1,3,5-Trisubstituted-1,2,4-triazole compounds
INVENTOR(S): Baldwin, John J., Lansdale, PA, United States
Novello, Frederick C., Berwyn, PA, United States
PATENT ASSIGNEE(S): Merck & Co., Inc., Rahway, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4048183		19770913
APPLICATION INFO.:	US 1976-672899		19760402 (5)

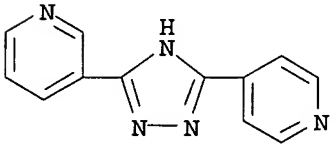
RELATED APPLN. INFO.: Division of Ser. No. US 1975-599504, filed on 28 Jul 1975, now patented, Pat. No. US 3978054 which is a division of Ser. No. US 1974-527992, filed on 29 Nov

1974, now patented, Pat. No. US 3928361 which is a division of Ser. No. US 1973-361914, filed on 21 May 1973, now patented, Pat. No. US 3882134
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Jaisle, Cecilia M. S.
LEGAL REPRESENTATIVE: Szura, Daniel T., Behan, J. Jerome
NUMBER OF CLAIMS: 4
EXEMPLARY CLAIM: 1
LINE COUNT: 152
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compounds useful in the treatment of asthma, the symptoms of allergy and in some instances in gout and hyperuricemia are described. The novel compounds are 1-substituted-1,2,4-triazoles being additionally substituted at the 3- and 5-positions with a pyridyl radical. Methods of preparing these tri-substituted triazoles are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 4329-78-6 36770-51-1
(reaction of, with organic halides)
RN 4329-78-6 USPATFULL
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



RN 36770-51-1 USPATFULL
CN Pyridine, 3-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



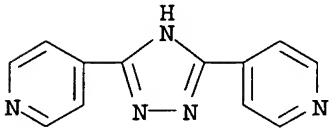
L5 ANSWER 6 OF 13 USPATFULL on STN
ACCESSION NUMBER: 76:54567 USPATFULL
TITLE: 1,3,5-Trisubstituted-1,2,4-triazole compounds used as bronchodilators
INVENTOR(S): Baldwin, John J., Lansdale, PA, United States
Novello, Frederick C., Berwyn, PA, United States
PATENT ASSIGNEE(S): Merck & Co., Inc., Rahway, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 3984558		19761005
APPLICATION INFO.:	US 1974-527994		19741129 (5)

RELATED APPLN. INFO.: Division of Ser. No. US 1973-361914, filed on 21 May 1973, now patented, Pat. No. US 3882134
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Schenkman, Leonard
LEGAL REPRESENTATIVE: Szura, Daniel T., Behan, J. J.

NUMBER OF CLAIMS: 12
EXEMPLARY CLAIM: 1
LINE COUNT: 150
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compounds useful in the treatment of asthma, the symptoms of allergy and in some instances in gout and hyperuricemia are described. The novel compounds are 1-substituted-1,2,4-triazoles being additionally substituted at the 3- and 5-positions with a pyridyl radical. Methods of preparing these tri-substituted triazoles are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 4329-78-6
(alkylation of)
RN 4329-78-6 USPATFULL
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)

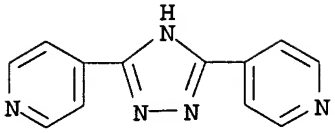


L5 ANSWER 7 OF 13 USPATFULL on STN
ACCESSION NUMBER: 76:48023 USPATFULL
TITLE: 1,3,5-Trisubstituted-1,2,4-triazole compounds
INVENTOR(S): Baldwin, John J., Lansdale, PA, United States
Novello, Frederick C., Berwyn, PA, United States
PATENT ASSIGNEE(S): Merck & Co., Inc., Rahway, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 3978054		19760831
APPLICATION INFO.:	US 1975-599504		19750728 (5)

RELATED APPLN. INFO.: Division of Ser. No. US 1974-527992, filed on 29 Nov 1974, now patented, Pat. No. US 3928361 which is a division of Ser. No. US 1973-361914, filed on 21 May 1973, now patented, Pat. No. US 3882134
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Trousof, Natalie
ASSISTANT EXAMINER: Bond, Robert T.
LEGAL REPRESENTATIVE: Szura, Daniel T., Behan, J. Jerome
NUMBER OF CLAIMS: 4
EXEMPLARY CLAIM: 1
LINE COUNT: 161
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compounds useful in the treatment of asthma, the symptoms of allergy and in some instances in gout and hyperuricemia are described. The novel compounds are 1-substituted-1,2,4-triazoles being additionally substituted at the 3- and 5-positions with a pyridyl radical. Methods of preparing these tri-substituted triazoles are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 4329-78-6
(alkylation of)
RN 4329-78-6 USPATFULL
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



L5 ANSWER 8 OF 13 USPATFULL on STN

ACCESSION NUMBER:	76:33638 USPATFULL
TITLE:	Pyridyl containing 1-benzenesulfonyl triazoles
INVENTOR(S):	Novello, Frederick C., Berwyn, PA, United States Baldwin, John J., Lansdale, PA, United States
PATENT ASSIGNEE(S):	Merck & Co., Inc., Rahway, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 3963731		19760615
APPLICATION INFO.:	US 1975-547847		19750206 (5)

RELATED APPLN. INFO.: Division of Ser. No. US 1973-361915, filed on 21 May 1973, now patented, Pat. No. US 3892762 which is a continuation-in-part of Ser. No. US 1970-75784, filed on 25 Sep 1970, now abandoned

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Jiles, Henry R.
ASSISTANT EXAMINER:	Ramsuer, R. W.
LEGAL REPRESENTATIVE:	Szura, Daniel T., Behan, J. Jerome
NUMBER OF CLAIMS:	3
EXEMPLARY CLAIM:	1
LINE COUNT:	489

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

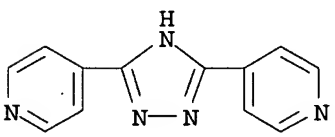
AB Compositions useful in the treatment of gout and hyperuricemia and containing a substituted 1,2,4-triazole as the active ingredient are provided, the triazoles being substituted at the 5 position with a pyridyl radical and at the 3 position with a phenyl or a pyridyl radical. Methods of preparing these substituted triazoles are described. Certain of the compounds are novel.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 4329-78-6
(acylation of)

RN 4329-78-6 USPATFULL

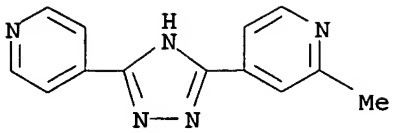
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



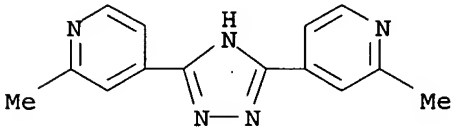
IT 36770-45-3P 36770-46-4P 36770-47-5P
36770-48-6P 36770-50-0P 36770-53-3P
(preparation of)

RN 36770-45-3 USPATFULL

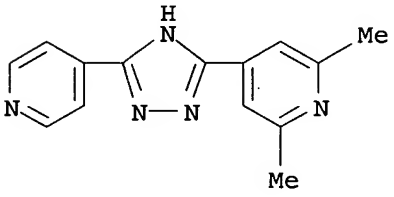
CN Pyridine, 2-methyl-4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



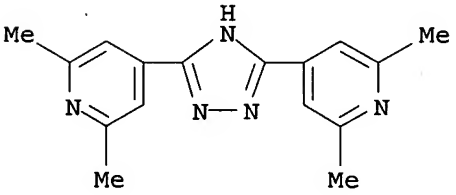
RN 36770-46-4 USPATFULL
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis[2-methyl- (9CI) (CA INDEX NAME)



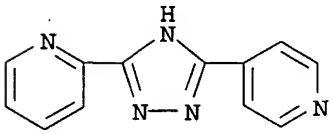
RN 36770-47-5 USPATFULL
CN Pyridine, 2,6-dimethyl-4-[5-(4-pyridinyl-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



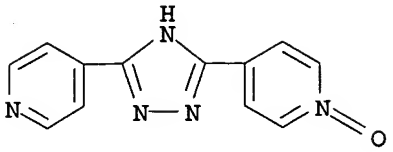
RN 36770-48-6 USPATFULL
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis[2,6-dimethyl- (9CI) (CA INDEX NAME)



RN 36770-50-0 USPATFULL
CN Pyridine, 2-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 36770-53-3 USPATFULL
CN Pyridine, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 1-oxide (9CI) (CA INDEX NAME)



L5 ANSWER 9 OF 13 USPATFULL on STN

ACCESSION NUMBER:	76:17380 USPATFULL
TITLE:	Anti-hyperuricemia composition
INVENTOR(S):	Baldwin, John J., Lansdale, PA, United States Novello, Frederick C., Berwyn, PA, United States
PATENT ASSIGNEE(S):	Merck & Co., Inc., Rahway, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 3947577		19760330
APPLICATION INFO.:	US 1975-539488		19750108 (5)

RELATED APPLN. INFO.: Division of Ser. No. US 1973-361915, filed on 21 May 1973, now patented, Pat. No. US 3892762 which is a continuation-in-part of Ser. No. US 1970-75784, filed on 25 Sep 1970, now abandoned

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Waddell, Frederick E.
LEGAL REPRESENTATIVE:	Szura, Daniel T., Behan, J. Jerome
NUMBER OF CLAIMS:	8
EXEMPLARY CLAIM:	1
LINE COUNT:	511

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

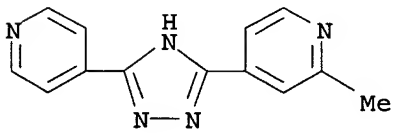
AB Compositions useful in the treatment of gout and hyperuricemia and containing a substituted 1,2,4-triazole as the active ingredient are provided, the triazoles being substituted at the 5 position with a pyridyl radical and at the 3 position with a phenyl or a pyridyl radical. Methods of preparing these substituted triazoles are described. Certain of the compounds are novel.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 36770-45-3 36770-47-5 36770-48-6
36770-50-0 36770-53-3
(antigout and antihyperuricemic agent)

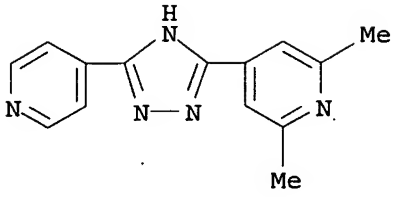
RN 36770-45-3 USPATFULL

CN Pyridine, 2-methyl-4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)

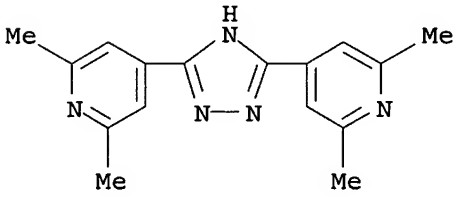


RN 36770-47-5 USPATFULL

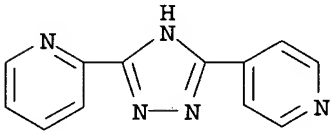
CN Pyridine, 2,6-dimethyl-4-[5-(4-pyridinyl-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



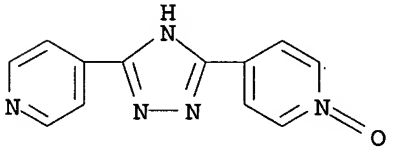
RN 36770-48-6 USPATFULL
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis[2,6-dimethyl- (9CI) (CA INDEX NAME)



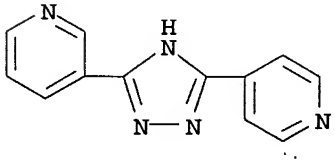
RN 36770-50-0 USPATFULL
CN Pyridine, 2-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 36770-53-3 USPATFULL
CN Pyridine, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 1-oxide (9CI) (CA INDEX NAME)

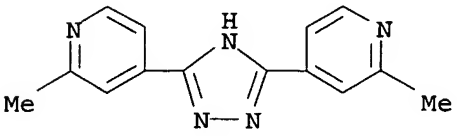


IT 36770-51-1
(in tablets, as antigout and antihyperuricemic agent)
RN 36770-51-1 USPATFULL
CN Pyridine, 3-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)

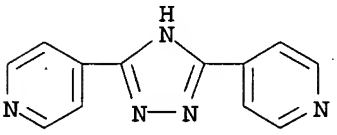


IT 36770-46-4P

(preparation of)
RN 36770-46-4 USPATFULL
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis[2-methyl- (9CI) (CA INDEX NAME)



IT 4329-78-6
(reaction of, with butyric anhydride)
RN 4329-78-6 USPATFULL
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)

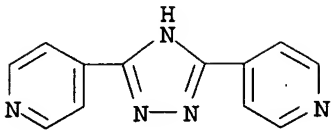


L5 ANSWER 10 OF 13 USPATFULL on STN
ACCESSION NUMBER: 75:70247 USPATFULL
TITLE: 1-(Sulfamoylphenylalkyl)-3,5-dipyridyl-1,2,4 triazoles
INVENTOR(S): Baldwin, John J., Lansdale, PA, United States
Novello, Frederick C., Berwyn, PA, United States
PATENT ASSIGNEE(S): Merck & Co., Inc., Rahway, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 3928361		19751223
APPLICATION INFO.:	US 1974-527992		19741129 (5)

RELATED APPLN. INFO.: Division of Ser. No. US 1973-361914, filed on 21 May 1973, now patented, Pat. No. US 3882134
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Jiles, Henry R.
ASSISTANT EXAMINER: Ramsuer, R. W.
LEGAL REPRESENTATIVE: Szura, Daniel T., Behan, J. Jerome, Anderson, Jr., Rudolph J.
NUMBER OF CLAIMS: 3
EXEMPLARY CLAIM: 1
LINE COUNT: 129
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compounds useful in the treatment of asthma, the symptoms of allergy and in some instances in gout and hyperuricemia are described. The novel compounds are 1-substituted-1,2,4-triazoles being additionally substituted at the 3- and 5-positions with a pyridyl radical. Methods of preparing these tri-substituted triazoles are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 4329-78-6
(alkylation of)
RN 4329-78-6 USPATFULL
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



L5 ANSWER 11 OF 13 USPATFULL on STN

ACCESSION NUMBER:	75:34468 USPATFULL
TITLE:	Novel substituted 1,2,4-triazoles
INVENTOR(S):	Baldwin, John J., Lansdale, PA, United States Novello, Frederick C., Berwyn, PA, United States
PATENT ASSIGNEE(S):	Merck & Co., Inc., Rahway, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 3892762		19750701
APPLICATION INFO.:	US 1973-361915		19730521 (5)

RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1970-75784, filed on 25 Sep 1970, now abandoned
DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Rotman, Alan L.
LEGAL REPRESENTATIVE:	Szura, Daniel T., Behan, J. Jerome
NUMBER OF CLAIMS:	9
EXEMPLARY CLAIM:	1
LINE COUNT:	506

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

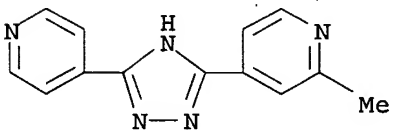
AB Compositions useful in the treatment of gout and hyperuricemia and containing a substituted 1,2,4-triazole as the active ingredient are provided, the triazoles being substituted at the 5 position with a pyridyl radical and at the 3 position with a phenyl or a pyridyl radical. Methods of preparing these substituted triazoles are described. Certain of the compounds are novel.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 36770-45-3P 36770-46-4P 36770-47-5P
36770-48-6P 36770-50-0P 36770-51-1P
36770-53-3P
(preparation of)

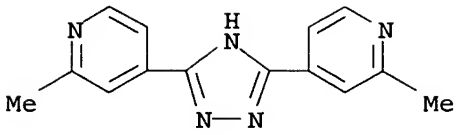
RN 36770-45-3 USPATFULL

CN Pyridine, 2-methyl-4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)

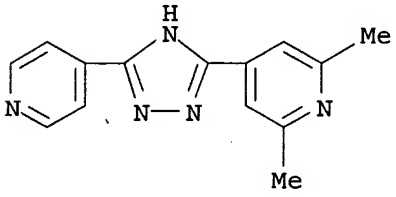


RN 36770-46-4 USPATFULL

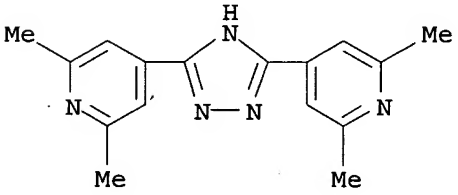
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis[2-methyl- (9CI) (CA INDEX NAME)



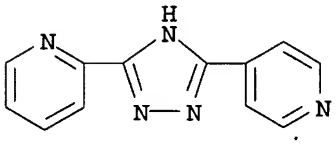
RN 36770-47-5 USPATFULL
CN Pyridine, 2,6-dimethyl-4-[5-(4-pyridinyl-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



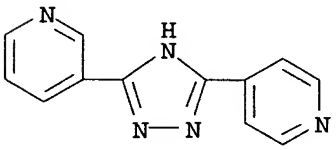
RN 36770-48-6 USPATFULL
CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis[2,6-dimethyl- (9CI) (CA INDEX NAME)



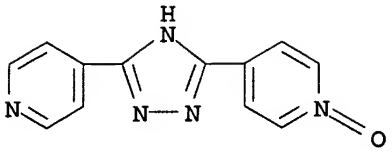
RN 36770-50-0 USPATFULL
CN Pyridine, 2-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 36770-51-1 USPATFULL
CN Pyridine, 3-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 36770-53-3 USPATFULL
CN Pyridine, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, 1-oxide (9CI) (CA INDEX NAME)



L5 ANSWER 12 OF 13 USPATFULL on STN

ACCESSION NUMBER:	75:23843 USPATFULL
TITLE:	1-Substituted-3,5-dipyridyl-1,2,4-triazoles
INVENTOR(S):	Baldwin, John J., Lansdale, PA, United States Novello, Frederick C., Berwyn, PA, United States
PATENT ASSIGNEE(S):	Merck & Co., Inc., Rahway, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 3882134		19750506	
APPLICATION INFO.:	US 1973-361914		19730521	(5)
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	Granted			
PRIMARY EXAMINER:	Rotman, Alan L.			
LEGAL REPRESENTATIVE:	Behan, J. Jerome, Szura, Daniel T.			
NUMBER OF CLAIMS:	10			
EXEMPLARY CLAIM:	1			
LINE COUNT:	142			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

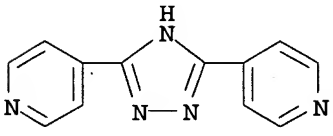
AB Compounds useful in the treatment of asthma, the symptoms of allergy and in some instances in gout and hyperuricemia are described. The novel compounds are 1-substituted-1,2,4-triazoles being additionally substituted at the 3- and 5-positions with a pyridyl radical. Methods of preparing these tri-substituted triazoles are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 4329-78-6 36770-51-1
(reaction of, with organic halides)

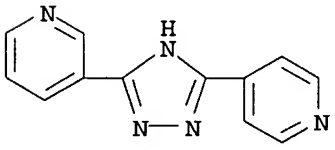
RN 4329-78-6 USPATFULL

CN Pyridine, 4,4'-(1H-1,2,4-triazole-3,5-diyl)bis- (9CI) (CA INDEX NAME)



RN 36770-51-1 USPATFULL

CN Pyridine, 3-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



L5 ANSWER 13 OF 13 USPAT2 on STN
ACCESSION NUMBER: 2005:5069 USPAT2
TITLE: 1 2 4-triazole compound
INVENTOR(S): Nakamura, Hiroshi, Nagareyama, JAPAN
Kaneda, Soichi, Shiki, JAPAN
Sato, Takahiro, Kita-ku, JAPAN
Ashizawa, Naoki, Kamifukuoka, JAPAN
Matsumoto, Koji, Saitama, JAPAN
Iwanaga, Takashi, Kazo, JAPAN
Inoue, Tsutomu, Funabashi, JAPAN
PATENT ASSIGNEE(S): Fuji Yakuhin Co., Ltd., Saitama, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 7074816	B2	20060711	
	WO 2003064410		20030807	
APPLICATION INFO.:	US 2002-495322		20021203	(10)
	WO 2002-JP12662		20021203	
			20040511	PCT 371 date

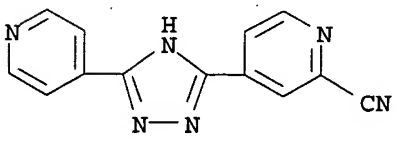
	NUMBER	DATE
PRIORITY INFORMATION:	JP 2002-17825	20020128

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Saeed, Kamal A.
ASSISTANT EXAMINER: Chung, Susannah L.
LEGAL REPRESENTATIVE: Price, Heneveld, Cooper, DeWitt & Litton, LLP
NUMBER OF CLAIMS: 8
EXEMPLARY CLAIM: 1
LINE COUNT: 771
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

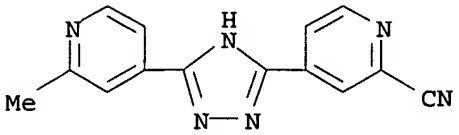
AB A novel 1,2,4-triazole compound which is useful as a therapeutic agent for hyperuricemia and gout due to hyperuricemia is provided. A compound is represented by the following general formula (1):

##STR1## wherein R.sub.2 represents an unsubstituted or substituted pyridyl group, R.sub.1 represents a similar pyridyl group, a pyridine-N-oxide group corresponding to these pyridyl groups, or a phenyl group, and R.sub.3 represents hydrogen or a lower alkyl group substituted with pivaloyloxy group and R.sub.3 bonds to a nitrogen atom in the ring. A process for production of a compound by reacting a nitrile and a hydrazide, and a therapeutic agent, particularly a xanthine oxidase inhibitor are also provided.

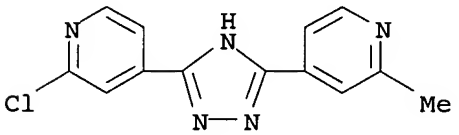
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 577778-58-6P 577778-70-2P 577778-74-6P
577778-82-6P 577778-84-8P 577778-85-9P
(preparation of 1,2,4-triazole derivs. for treatment of hyperuricemia)
RN 577778-58-6 USPAT2
CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



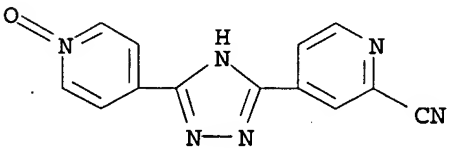
RN 577778-70-2 USPAT2
CN 2-Pyridinecarbonitrile, 4-[5-(2-methyl-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



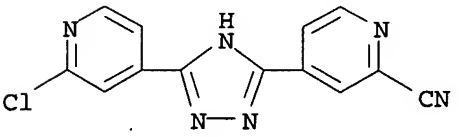
RN 577778-74-6 USPAT2
CN Pyridine, 2-chloro-4-[5-(2-methyl-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



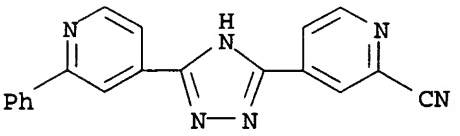
RN 577778-82-6 USPAT2
CN 2-Pyridinecarbonitrile, 4-[5-(1-oxido-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 577778-84-8 USPAT2
CN 2-Pyridinecarbonitrile, 4-[5-(2-chloro-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)



RN 577778-85-9 USPAT2
CN 2-Pyridinecarbonitrile, 4-[5-(2-phenyl-4-pyridinyl)-1H-1,2,4-triazol-3-yl]- (9CI) (CA INDEX NAME)

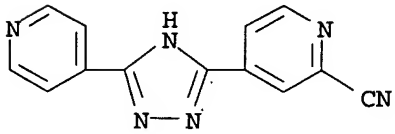


IT 577778-88-2P
(preparation of 1,2,4-triazole derivs. for treatment of hyperuricemia)
RN 577778-88-2 USPAT2

CN 2-Pyridinecarbonitrile, 4-[5-(4-pyridinyl)-1H-1,2,4-triazol-3-yl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

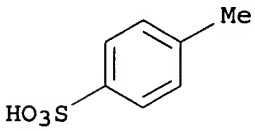
CM 1

CRN 577778-58-6
CMF C13 H8 N6



CM 2

CRN 104-15-4
CMF C7 H8 O3 S



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